# Trains

25¢

for SEPTEMBER

Frank Quin, 8414 88th St., Woodhaven, N. Y.

## Westward to Buffalo on the Lackawanna.

Straight west across New Jersey runs the Lackawanna—west from the busy, dirty waterfront at Hoboken on the Hudson through pretty suburban towns, then over the rolling, scenic hills to Delaware Water Gap, into Pennsylvania and the Pocono Mountains, and finally through green southern New York State to Buffalo. Take No. 3 or 6, the *Lackawanna Limited*, for this daylight ride that should not be missed. Photographer Frank Quin had remarkable luck at Port Morris, N. J., and caught No. 3 (with passenger 4-8-4 No. 1504) overtaking and passing symbol freight HB-9 with freight 4-8-4 No. 1607.

## *Waybills*

At the suggestion of TRAINS, President J. J. Pelley of the A. A. R. has sent to executives of member railroads a letter advising that his bulletins last Spring regarding the presence of unauthorized persons on railroad property, photographing of railroad facilities, and the like, were not intended to discourage operation of railfan excursions, provided that such excursions do not include inspection of vital facilities not open to the public in general, such as shops, freight terminals, docks, and the like. Mr. Pelley's letter also gives specific approval to off-the-beaten-path excursions in cases where the railroads concerned are in position to handle them. Troop movements have cut into the passenger equipment reserve, and many proposed railfan trips have necessarily been curtailed for this reason.

The railroads do indeed realize the friendship of the railfans, and it is not the desire of the A. A. R. or any individual railroad to discourage this friendship. In the present emergency some restriction is necessary, and the original bulletin was, just to be on the safe side, interpreted too strictly in many cases. The interpretation, interestingly, was more liberal toward the West, and most liberal on the West Coast.

We are certain that railfans wish to cooperate, and we suggest as a good rule for any time, *always ask permission first.* Remember, too, that a railroad employee who refuses permission for photography or entrance on company property is only doing his job as he feels best.

*A. C. K.*

# Trains

*Editors: A. C. Kalmbach, Linn H. Westcott, Willard V. Anderson*

Vol. 1 September, 1941 No. 11


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*Cover photo by Herbert Weisberger, Brooklyn, N. Y. Masthead photo by Robert G. Imrie, Sacramento, Calif.*


TRAINS (title registered as a trade mark in the United States Patent Office) is published monthly by Kalmbach Publishing Co., 1568 W. Pierce St., Milwaukee, Wis., U. S. A.

Entered as second-class matter Oct. 11, 1940, at the post office at Milwaukee, Wis., under the Act of March 3, 1879.

Subscription Rates: Per year in U. S., Central and South America, $2.50
Single copies 25 cents. In other countries, $3.00 per year; single copies 30 cents.

The first issue of TRAINS was for November, 1940. All back copies available at 25 cents each.

## Even in the desert locomotives need water; 471 gets hers.

North and south, from the intermountain region of central Colorado into the Rio Grande Valley of New Mexico, runs the Denver & Rio Grande's Santa Fe narrow gauge branch, from present-day Colorado to the old Spanish atmosphere of Embudo and Santa Fe. No. 471, one of the Rio Grande's "sports model" narrow gauge Mikados, is taking water in the valley of the Rio Grande near the southern end of the line. In this dry country locomotive water becomes a major operating consideration and superintendents can never forget that for every pound of coal burned a locomotive uses nearly eight pounds of water.

John Maxwell, 1416 Pennsylvania Ave., Denver, Colo.

# *Narrow Gauge to Santa Fe*

**★ 125 miles of desert railroad in a land where happy people are too poor to buy a newspaper.**

*By Forest Crossen.*

IF THE abandonment of service on the Denver & Rio Grande Western's narrow gauge branch to Santa Fe is permitted, one of the most picturesque railroad trips in America will come to an end. I know, for I have taken it.

As I stood alone in the morning sunlight on the station platform at Antonito, Colo., the gratification of a deep and passionate longing seeming to explode within me, crinkling my skin and tightening my throat. October had come again, and I was young, setting out for Santa Fe, golden city, aboard the D&RGW's "Chili Line."

At Antonito, southernmost point of the San Luis Valley, that great floor of land hemmed in by proud purple mountains, the three rails of mixed standard and narrow gauge from Alamosa come to an end; only two narrow gauge lines continue on—one to Durango, one to Santa Fe.

It was 8:05, and the long train from Alamosa pulled in, at its head engine No. 483, a squat narrow gauge Mikado with outside frame, odd, powerful in appearance, and utterly foreign to our ideas of clean-wheeled American locomotives. Much larger was it than the sleek 471, also an outside-frame Mikado, waiting on the Santa Fe main line, its air pump wheezing and throbbing.

Back and forth with clanging bells and clashing couplers the two engines switched, until the three cars for Santa Fe stood coupled behind the smart 471. Two were combination mail-baggage-express cars, and one was a chair coach. Instead of vestibules they had the open platforms of a bygone day.

For a long moment I stood looking up at the chair coach, feeling a faint nostalgia. As a little boy I had ridden in a similar coach to visit my grandmother, now dust these many years.

At last we were ready, three cattle cars coupled behind the engine to make up the mixed train. Quickly I climbed aboard and sat down, leaning back for an instant with eyes closed as the wheels began to turn, the bawling whistle and clanging bell music from a lost day.

We left the yards and were out on the far lonely line to Santa Fe, gliding through the sagebrush and chico shrub growing amongst blackened honeycombed lava boulders, the work of ancient fires. Faster we surged along, the click-clack-clickety-clack of wheels over rail joints raising in the song which I hope never ceases to stir me.

In the distance, across a gulch cut through the rising land, I saw a dark moving line with trailing plume of black—the Durango passenger train.

I looked about me in the car, the memories of lost boyhood poignant. Here were the same double seats (a bit narrower than those of old standard gauge coaches), two rows of them. At each end stood a protected stove with staggered pipe and across the aisle the golden oak toilets. And, wonder of wonders, overhead hung something that I never again expected to see: the golden brass, glittering with the crystal of glass chimneys and sheen of milky china shades—the kerosene lamps of bygone days.

But now, lo, I rode in an alien land. "Mujeres," read the signs on side and door of one toilet, with "Women" directly below. On the other "Hombres" and "Men." This train traversed a land where Spanish is the favored tongue.

I heard it now, the soft and liquid speech of the Southwest, and I saw the smiling dark faces of New Spain. Across the aisle sat a pretty girl with her people, and farther back in the car several tall New Mexicans returning to their homeland.

Onward we swept, the exhausts of the locomotive louder; the grade was growing heavier. On my right appeared the great blue dome of lone San Antone Mountain, its frost-

Linn H. Westcott.

## Along the Rio Grande.

**This is the short route from central Colorado to the Southwest. It might have been the main line of the D&RGW if that road had followed Gen. Palmer's original vision of a road from Colorado to Mexico City, or it might have been a portion of the Santa Fe if that road had kept control of the Royal Gorge. Significant railroad link of yesterday and today, and yet running through a country so arid of traffic that abandonment is imminent! Take this ride before it is too late.**

seared aspens like gold splashed from a crucible. Far on my left rose the ermine-crested Sangre de Cristo Range. Blood of Christ, it means in our less rich English tongue.

A brakeman came up the aisle and stirred the fire in the stove, flashing a warm smile at me before returning to his seat in the rear of the coach. I watched him sway down the narrow way on his experienced legs, tensing himself against the lurch of the wheels on the little track.

We crossed the New Mexico line, and, steadily passing across the face of a desolate country, chico and sagebrush and rock covered, came to Skarda, lonely stop with side track and post office in a little store.

A mail sack went sailing off here, the train scarcely slackening its pace. We went on through a land of rocky ridges, cedar covered. Once we passed a tiny cemetery with the crosses of an old faith.

Presently came the grind of brake shoes gripping the whirling wheels, and the train slowed to a stop at a yellow section house in a tiny hamlet named No Agua (No Water). And well the name suited, for on the siding stood a tank car filled at Antonito with the precious fluid without which man cannot exist.

A Mexican boy got down, grinning at the family of his own people standing in the section house door. They gave him the age-old greeting

## Southward from Antonito.

Leave Denver at 7:30 p. m. on D&RGW No. 15. By 7 a. m. you'll have to turn out of the standard gauge Pullman to leave Alamosa on the narrow gauge *San Juan Express*, No. 115. The 29 flat miles to Antonito are fast for 44" drivers, up to 45 m. p. h. At Antonito, 8:05 a. m., No. 155 heads west and the Santa Fe Branch train makes ready to start its southward trek at 8:15.

Forest Crossen.

Flag stop No Agua, with its hewn log station and section house, is 28 miles or 85 minutes south of Antonito.

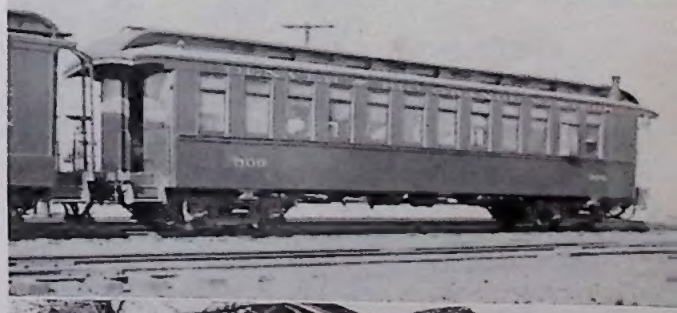
Otto C. Perry, 74 S. Elati St., Denver, Colo.

Barranca Hill, 7 miles of 4 per cent grade, drops the branch down into the Rio Grande Valley at Embudo, 72 miles south of Antonito. View from rear of train.

John W. Maxwell.

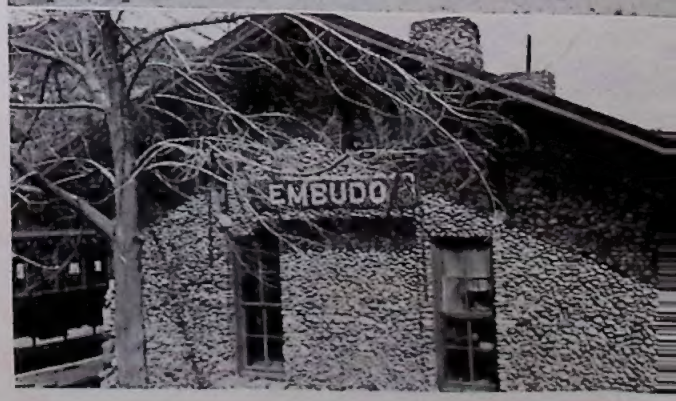
An ordinary narrow gauge passenger coach serves also as caboose, with a bay window built in for crew.

Forest Crossen.



Embudo station, in the sunny Rio Grande Valley, was once an ordinary frame structure, but an ambitious agent filled his spare hours by covering it with stone.

Forest Crossen.




to the wanderer come home, smiling at the travelers on the train going they knew not where, imagining for themselves the romance at each journey's end.

We slid by little ranch houses built of sun-hardened adobe mixed and dried on the spot. Women came to the doors, the train a flash of bright romance across the dull length of their days. From one a shapely young creature came out and waved to the engineer, the slight wind molding her light cotton dress against thigh and breast. And gallantly he touched the whistle cord.

I saw a roll of something white fly out from the engine and land near her feet. She picked it up, her smile gleaming. It was a newspaper, only token of a busy far away world.

At Tres Piedras (Three Rocks) we stopped momentarily. The pretty girl passenger got off, flashing a last smile at me.

Across a plateau, a marching cedar and pinion covered wilderness tamed only by the few lone adobe ranch houses along the way, we surged. Always on our left rose the proud Sangre de Cristo Mountains, the Rio Grande running at their feet heading south to form the boundary between the United States and Mexico.

The friendly brakeman cleared a seat for me ahead of his own with the odd bay window. W. T. Lewis was his name, and he went by the nickname of Red. Across the aisle sat Conductor

Lucius Beebe.

**Snow lingers late even in New Mexico.**

There's always snow somewhere along the Rio Grande system. High up in the Colorado Rockies it is expected in late Spring or even in Summer, but snow lingers long even along that farthest south extension into Santa Fe. The northward mixed train is here climbing into the high, cold New Mexico plateau.

Henry Willis, tall, lanky, friendly, a veteran with nearly fifty years' service to his record. He too had a little bay window.

"They're so we can see signals from the engine," explained Red. "Also if any wheels are off the track."

I looked out of his window as the train rounded a curve, watching the main and side rods of the locomotive rising, falling, rising, falling, thrilling to the thick black plume of smoke shooting high from the tall smokestack at each stroke of the pistons. And I saw the engineer, C. W. Albee, leaning from his cab window, gauntleted hand on throttle and hawk eyes on the track rising to meet him.

In Red's double seat lay a number of newspapers, which he was rolling into tight rolls, snapping rubber bands around them. "Oh, these are newspapers I gather up in Alamosa to throw off to people along the way," he explained. "They don't have money to buy papers."

In restaurant, rooming house and workplain office of the smoky terminal big-hearted cigar-smoking railroad men in denim and in blue serge had tossed him the papers they had read. Sure they'd give their papers to those poor devils out there in that lonesome country.

Suddenly Red's attention became riveted

on something and he smiled. "Over there's Taos."

There it lay, a long, thick, light gray line near the foot of the great mountain wall: Taos, golden city. Out from here had ridden the great Kit Carson in fringed buckskin, rifle in hand, waving goodbye to his beautiful Spanish wife, riding out to battle against the bronze sons of America. And hither he had ridden back, leaning down from the saddle to kiss her eager red lips. Today, against the sun-baked adobe walls laid up no man knew when, sit these bronze sons of America, waiting with Time-instilled patience for the day when once more all will be theirs.

But ever forward we surged through the lonely uplands, halting at Taos Junction, where the operator handed us a flimsy message about the war in Europe. How futile, mad and far it seemed in this wilderness of Time!

The tall New Mexicans hurried over to the general store and returned with bread, meat and cheese in their hands. To them the business of living must go on. They were going home, to peace and rest, to love and easy laughter.

Again we swung down the little track between the twisted cedar and pinion trees. Then, suddenly, I felt and heard the change.

The speed slackened to a crawl. To my ears came the harsh grind of brakes, the hard hiss of air. We had left the plateau and were going down, down.

"We're going down Barranca Hill," explained Red. "We drop 1128 feet here in seven and a half miles. Most of the grade's 4 per cent, and the running time's 46 minutes." He glanced up at the air gauge beside his window. "There's double retainers on these cars. We can't take chances; an engineer who's been off this run over a year can't take a train down without a regular engineer."

He smiled and pointed down to a cone-shaped peak of lava and coarse shrubs, a harsh, forbidding-looking cone from whence in ancient days had belched the Hell fire of volcanic fury. "You're looking down on Embudo Mountain. And down there's the Rio Grande Valley."

In sharp contrast it was, golden with great trees touched by the magic brush of October. And there were little smiling fields, with straight rows of light buff corn stalks, fruit trees and low plants. The Valley of the Rio Grande, its name like a lilting song, the river which gave its name to the railroad in its infant days. General Palmer planned to run the railroad to Mexico City, but fate, perhaps good fortune, made the Rio Grande an east-west line, this Santa Fe link only a branch.

Down we went. I too looked at the air gauge, watching the needle swing back at each application of the hissing air. Up in the locomotive cab the engineer's cunning hand moved the golden levers of the brake valves, feeling as in his own veins the positive action of the rushing air, his faultless control of the train a shout of victory in his blood.

We came to the bottom. Red Lewis stepped out to the rear platform, and I followed. He stretched upward to throw a little lever, and his answer was the hiss of air released.

"We're through with the second retainer now."

Forward we surged, like a weight released high on a long incline. Along the muddy twisting river we ran, the proud river born in the fierce high country of Colorado of roaring white streams leaping past the bases of menacing mountains around whose broken barren peaks brood the eternal Storm Gods. But here it swept on leisurely, casually, doing its work of carrying sand and rock to change the face of the world, the work it will do forever.

Beside it were little adobe houses and some laid up of the polished and worn stones taken

**Barranca Hill from cab.**

Past the squat boiler of 471 the fireman can see the three-foot gauge track winding steadily upward on 4 per cent grade from the warm river valley at Embudo to the plateau extending northward.

Jack C. Thode, 2251 Forest St., Denver, Colo.

from its bed. Little homes standing so quietly in the shade of the cottonwoods, homes that have looked upon rich life and resistless death and bitter sorrow and flaming joy.

We drew to a stop at Embudo. There the northbound train was waiting on a side track; the engineers greeted each other with smiling salutes. I stepped down from the little coach, the hot sun of early afternoon upon me. Up on the plateau it had been chilly. And as I walked, the earth exultingly whispered that here in this sheltered valley it was always warm, that the great broken hills deflected the bitter winds of Winter.

The sight of the station stopped me short. It too was a part of the river, the walls laid up of rocks rolled and ground and polished by its eternal flow. And from the dusty files of memory came the story of its builder:

A consumptive he had been, creeping here to this warm valley from the foggy chill of a far land. He had come as agent, doing the light work of this little station. On his hands hung Time, Time that drove him, when through his veins surged clearing blood that mended his ravished lungs.

He carried rocks from the river's edge and laid them in rich mortar around the unlovely frame wall of the station, building a thing of beauty. On and on had gone his labor of love, until he had created something that caused all men to look and to feel better for having seen.

And now he is dead, with a marker above his head. But no monument can equal his creation of enduring beauty in the deep Valley of the Rio Grande.

The tall New Mexicans alighted. I heard them answering the cheerful greetings of the young man loading a mail and express truck. They smiled and laughed, their liquid Spanish gay. With bright eyes they watched canvas-covered bed rolls unloaded from the baggage car.

"Where have you been?" I asked one.

"Wyoming," he answered with a flash of white teeth. "All Summer we have herd' the sheep."

Now they were home from the prairie seas, the wages of several months in money belts around their waists, home to their little farms cared for by wives and old men. Proud and straight they stood, men of success who could take their ease in the warmth of the sun and crackling pinion fires until Spring came once more.

I answered their last upflung hands of farewell as they crossed the river on the old wooden bridge. Going Home. My thoughts went with the tall handsome one to whom I had spoken, seeing him alight from the little truck before a little adobe house, catching in his arms the shapely woman who sprang forward with a throbbing cry in her throat. Toward the house they moved, he half carrying her as she looked up into his eyes, her face like a Spanish rose in the late sun.

A few miles down the river from Embudo the valley widened, and we began to pass through the little farms that have come down as precious heritages through the centuries. Divided and subdivided they have been by the wills of old men and women breathing their last in darkened adobe rooms, until farms of one-third acre are not uncommon, while five acres mark a man as rich. East and west run the fences, for so the lines are decreed on the yellowed parchment of ancient Spanish grants.

"These people have one of the oldest water rights in the United States," observed Red, pointing to a full ditch alongside the track. "It was given by the King of Spain."

Ironic are the ways of men, that a black-bearded monarch sitting on a golden throne beyond the tremendous seas could give these timeless people the right to use water from their own river!

"Look at the chili hanging on that house," suggested Red. "Chili's their money crop, and they're drying it now on these double strings. The strings sell from $1.50 to $3 apiece."

Up on the first bench of the hill, where land was not so precious, stood the mud-plastered adobe house, the vigas of old-time Spanish-Indian architecture projecting from its flat roof. In a straight line well up on the wall hung the five-foot strings of chili, a heavy blanket of warm rich red. These, when dry, would find a ready sale, for food without chili to the Spanish peoples of the Southwest is without savor.

"They're getting everything in for Winter," continued Red. "They've done this way for hundreds of years, put a year's supply of food in the house each Fall." He paused a moment and looked at me meaningly. "It makes no difference to these people whether there's a war in Europe or Asia. Their way of life is truly self-contained."

We went by a little farmstead where the

Otto C. Perry.

**It takes engines to run a railroad.**

Little old Ten-Wheelers like the 169 sometimes work the mixed train. This one is pulling No. 426 up the grade north from Santa Fe at the same spot shown on page 8. Bulk of the work on this branch is, however, performed by the 470 series Mikados, 78-ton (without tender) jobs built by American in 1923. The 480 and 490 series Mikados are some 15 tons heavier. The D&RGW has 45 narrow gauge 2-8-2's.

family, squatted in the bare yard, was shucking corn, the shucks piled high about them. This corn as needed would be ground to make tortillas. I saw squashes and pumpkins cut in pieces drying in the sun and a line hung with something dark.

"That's jerky," put in Conductor Willis. "Yes, there on the lines. When these people kill sheep and cattle, they cut the meat in thin slices, dip it in chili sauce and hang it in the sun to dry. The flies never bother it, and let me tell you it's good eating."

"This is a great valley for fruit," added Red. "They grow peaches, pears and plums and dry them in the sun."

The sun, always the sun, to these people their father and their brother and their life.

We stopped at tiny hamlets of chili-hung adobe houses in the shade of stately cottonwoods richly golden, the tinkling, gurgling lilt of the Western water ditches rising in the hazy autumn air. And there beside the track stood little knots of people smiling up at the train, their dark eyes warm with friendliness.

Looking back, I saw them all standing beside the track, watching us fade into the romance land of travelers. Unhurried, they turned away, certain of the morrow. As long as they had the land and the sun and the water——

Francis Denton, 208 N. High St., Albuquerque, N. M.

Onward we went through the warm afternoon, past a hundred adobe houses, all flaming red with drying chili, exclaiming at the sheer

Otto C. Perry.

**Water level grade along the Rio Grande.**

Since the first lines were built more than 100 years ago, railroads have followed water courses wherever possible. For 25 miles below Embudo the banks of the winding Rio Grande carry the steel rails of its namesake. On opposite bank are portions of a grade projected toward Albuquerque but never finished.

beauty of it, realizing why some wit long ago had called the railroad the "Chili Line." Nearby ran the river now, the golden cottonwoods lining its winding bank. Across it the state was building a public highway; at my right rose the high wall of the valley, the shrub pinion covered hills of rock and cracked earth.

Suddenly Red grasped my shoulder. "See that little building there?" He pointed to a squared-log hut chinked with adobe, its flat roof of mud. Not over 12 feet square it was, standing astride a ditch of running water. "That's an old-time chili mill. The people around here bring in their dried chili to have it ground."

How long it had run we could not even guess, it looked so old.

"There's my boy," announced Red, stepping to the rear platform with one of the rolled-up papers. A moment later it sailed toward the lad, who retrieved it with a wide smile.

"He's here every day when I come through," explained Red, the inward satisfaction a gentle light in his eyes.

We slipped past little fields of grain, now cut, the stubble golden on the warm rich soil.

"They cut grain here in these little fields with a sickle and a scythe and cradle," continued Red. "Just like all our people did years ago. And they thresh this grain in the Winter time with a flail or by driving the cattle around and around over it, throwing it up for the wind to drift away the chaff."

We passed a little siding with a tiny open shed station marked Prince.

"There's the old ranch of former Governor Prince of New Mexico," put in Conductor

Willis. "He was an important man, and the railroad put in that siding for his shipping. He had a big ranch for this valley."

We came to Espanola, busy town with a paved main street stretching toward the steeply rising Sangre de Cristo Mountains. A warm and smiling street it was, not the uniformly dreary Main Street of America's small towns.

The train crew set out the three cattle cars here, unloaded the heavy mail and express that characterizes the West, and on we went.

A few miles beyond, Red touched my arm. "Over here on the right we're coming to the Santa Clara Indian Pueblo."

We came upon it suddenly, the little adobe houses, sheds and corrals lining streets wide enough for burro carts in single file. In the ways of their fathers these Indians were living out their lives, growing the blue flinty corn of New Mexico, chili, beans and fruit in little fields, fattening cattle and sheep on the high country slopes for Winter jerky; gaping wonderingly at the steam monster that chugged by their ancient hostel.

We surged past lonely ranch houses, where Red threw out the last of his papers. He settled back with a smile. "Yes, sir, each man in the crew's got some kids or women along the way he throws papers off to. Most of 'em we've never had a chance to talk to, but every day they're here for their papers. Lots of these people never travel more than a few miles from their homes in a whole lifetime."

Across a steel bridge over the muddy Rio Grande we moved to a lonely water tank and stopped for the engine to take water.

I heard a roar, and looking ahead from the lowest step of the rear platform, saw dense white steam-driven water shoot out from the engineer's blow-off valve. Then a second roar as Fireman Roy Brown threw open the valve on his side.

Stunned silence fell about us, as the blow-off valves snapped shut, silence so dead as to be painful. In the quiet air the falling mists of the once mad water hung like the gossamer veils of a princess on her wedding day.

Again we continued on our way. I sat on the rear platform steps, watching the engine round the curves, the rising, falling of the rods like the beat of slow majestic music.

Once again the exhausts of the locomotive blasted loudly. Upgrade we went to the cedar and pinion land, the lonely high country. On and on as the sun dropped, flooding the twisted trunks of the trees with a golden light, we advanced on Santa Fe, which gave its name to yet another railroad. And once again the ecstasy of near victory swelled my breast.

We flashed through a cut, and Red touched my arm, pointing out the city.

On a gentle rise of land below us she lay, her adobe walls soft in the late afternoon sun, alone and aloof, yet strangely warm, like a queen drawn apart from the mad clash of our lives, Santa Fe, golden city.

Down we went under Engineer Albee's master hand. Again and yet again his whistle shrilled its far, lonely cry.

I thought of my countrymen who had come to Santa Fe through the mellow years: the tall bearded Missouri and Kentucky trappers in fringed buckskin, the dusty bull-whackers trudging beside canvas-topped Conestoga wagons on the Santa Fe Trail, and the veteran crew of this train I now rode. When first they came, they too had been young, the blood of youth smoking in their veins.

Past the red brick walls of St. Catherine's Indian School we creaked and crossed the dry arroyo into the outskirts of Santa Fe. Up winding Jefferson Street Engineer Albee took us, whistle blowing, bell clanging. And in the street stood children and women who waved greetings that touched my heart.

Across San Francisco, the principal street running up to the historic Plaza, we crept. San Francisco Street, little wider than an alley, paved with sandstone blocks, how many million feet, now dust, have gone up and down your narrow glamor-bordered way?

We crossed the trestle over the Santa Fe River and brushed by the weathered stone wall surrounding old Guadalupe Church with its graceful Lombardy Poplars. And here again the past, the long dead past, in the million-footed walk beside the ancient wall.

On and on across the narrow romantic streets—Agua Fria, De Vargas, Aztec and Montezuma Avenue—we moved, whistle and bell momentarily breaking the drowsy spell of Santa Fe, until we reached the station.

I stepped down from the old chair coach of the "Chili Line," a glow of exultation going up over me. I was at once one with the gallant company of my countrymen who had ridden in the dust of the danger-bound Santa Fe Trail and over the narrow winding track of this pioneer railroad to Santa Fe.

Courtesy Edwin K. Heath, Barre, Vt.

# From the Chicago World's Fair of 1893 to the B&C Railroad.

The Lima Locomotive Works, Lima, O., sent its 450th completed unit to the Chicago World's Fair in 1893. This was a Shay geared locomotive numbered 450, and was used by the B&C for a while, but proved too slow. This photo was taken in Barre. Printed on the side of the tender is the following:

SHAY PATENT LOCOMOTIVE ENGINE

manufactured by the

LIMA LOCOMOTIVE & MACHINE CO., LIMA, OHIO, U. S. A.

BOILER 44 in. WAGONTOP 11 in. TUBES, 106, 96 in. LONG, 2 in. Diam.

FIRE BOX, 73 inches LONG, 40 inches WIDE & 52 inches DEEP.

3 CYLINDERS 11 INCHES BORE & 12 INCHES STROKE.

8 DRIVERS, 32 INCHES DIAMETER. CAPACITY OF TANK 1800 GALLONS.

4 INCH SYPHON. 8 INCH PATENT STEAM BRAKE. GEARED 19 to 42.

GAUGE, 56½ inches. RIGID WHEEL BASE, 52 inches.

TOTAL WHEEL BASE 27 ft. 4 in.

LENGTH OVER ALL, 39 ft. WEIGHT IN WORKING ORDER, 80,000 lbs.

MANUFACTURERS OF ALL KINDS & TYPES OF AMERICAN LOCOMOTIVES.

FREIGHT CARS, CABOOSES, CAR WHEELS & RAILWAY CASTINGS.

LOGGING, MINING & ALL KINDS OF SPECIAL CARS.

# *Granite From Vermont*

★ Barre & Chelsea Railroad, steepest of the railways east of the Mississippi, brings stone down from the mountains.

*By Elwin K. Heath.*

THE Barre & Chelsea Railroad, of Vermont, is known as "the steepest standard gauge railroad east of the Mississippi River, not employing other than friction for traction." Operating entirely for freight service now, it did, until 1922, handle a goodly amount of passenger service, transporting quarry workers. Its freight business is made up for the most part of granite taken from the quarries in Websterville and Graniteville, which nestle atop Millstone Hill.

These towns lie approximately south-southeast of Barre, where the B&C has its start. From a point 600 feet above sea level the railroad climbs to a height of 1580 feet above sea level, in less than 3½ miles as the crow flies, on grades of 5 per cent maximum.

Actually the Barre & Chelsea has 22½ miles of trackage, laid out in the following manner:

11.9 miles of mainline.
4.4 miles of sidings.
1.7 miles leased to the Montpelier & Wells River Railroad Company.

The last stretch runs from Barre toward Montpelier and is a part of the M&WR Barre

**Comin' 'round the mountain.**

With somewhere between 100 and 150 tons of granite, No. 6 rolls down hill on the lower end of her train. Riders set the hand brakes when needed.

William Moedinger Jr., 23 E. Vine St., Lancaster, Pa.

William Moedinger Jr.

## Down "The Hill" to Barre.

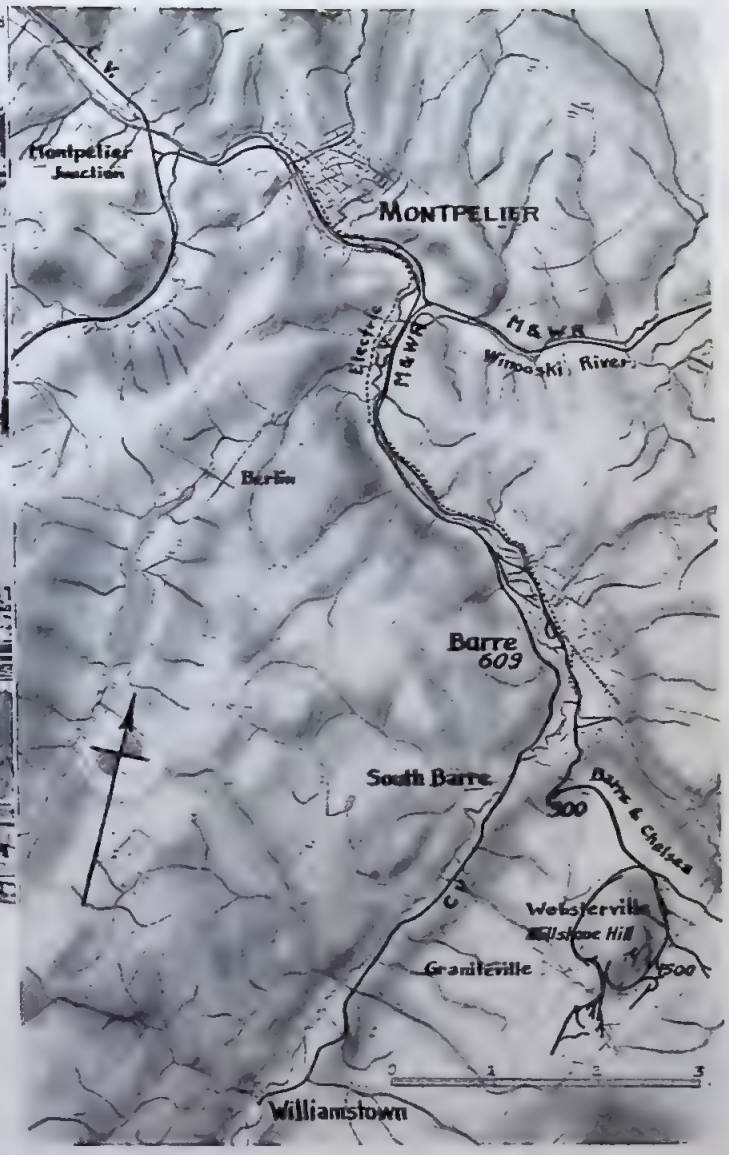
Upper left: Coming from 300 feet below, out of the Rock of Ages Quarry, this granite block will be placed on a waiting B&C flat car. Lower left: Ten minutes later the granite block is on its way to Barre. Upper right: Arriving in Barre City yards. Engine No. 6, originally named *Hercules*, later *F. H. Smith*, now bears no name, was built by Baldwin Locomotive Works in 1912. Center right: This granite block of 22 tons weight, from the Wells-Lamson Quarry, is on the track scales at Barre City. Transportation charge will be $19.80, figured at the carload rate of 4½ cents per hundredweight from quarry to manufacturer. Lower right: Barre City Station, located on leased property of the B&C, is used both by the B&C and by the Montpelier & Wells River.

branch. The Central Vermont also serves Barre.

The Barre Railroad was incorporated April 9, 1888. Its purpose was to operate a railroad from Barre to the granite quarries in Williamstown. September, 1913, saw the road merged with the East Barre & Chelsea Railroad Company. The two then became known as the Barre and Chelsea Railroad Company. The capital stock of the Barre Railroad Company, amounting to $400,000, became the stock of the Barre & Chelsea Railroad Company.

Again, on November 18, 1911, at which time it also took over control of the Montpelier & Wells River Railroad Company, the Boston & Maine Railroad Company purchased the B&C, which proved a good investment, as the Barre & Chelsea paid dividends until 1922 and again in 1934 and 1937.

Blocks of granite quarried at Websterville and Graniteville range in size from small cemetery stones to the tremendous roof blocks used in large bank vaults. Big-sized cuts often require the use of more than one flat car, while the roof blocks are almost always handled in well cars, although some are so large that they necessitate building a cradle on an extra capacity flat car to support the block.




Top: Locomotive No. 2 was built in 1889. After serving the B&C it was sold to Wetmore & Morse. Second: Locomotive No. 4, built in 1902. In 1940 it was sold to the Rock of Ages Corporation, by the B&C. Third: No. 5, built in 1909, in service today. Lower: No. 6, in use today, was built in 1912. All these engines were built by Baldwin and are 0-6-2ST (saddle tank) except No. 2, an 0-6-0ST.

An impressive array of locomotives has been owned by the B&A over the years. There can be added to those listed on page 18, a Shay locomotive, the 450th locomotive to be turned out of the Lima Locomotive Works, Lima, O., and exhibited at the Chicago World's Fair in 1893. It proved to be too slow for the job required of it on the B&C. Another engine, called the *Granite City*, was a second-hand tank engine, an 0-4-0, purchased from a logging company. She was the No. 1 on the Barre & Chelsea until delivery by Baldwin of the No. 2, in 1889.

One hundred tons is the rating set for engines 5 and 6 when ascending the grades. A limit of 16 cars is the rule on the descent. This is because just that number of cars will leave clearance for the engine to run around on the switchback at South Barre. The consist on ascending trains is, besides the engine and caboose, seven empty flat cars or one load and two empties. Upgrade freight loads are made up of coal and machinery needed at the quarries.

Other rolling stock owned by this hard working railroad comprises a number of flat cars to which have been added 50 50-ton flat cars leased from the Boston & Maine Railroad

## Barre & Chelsea motive power.

| Class | Number | Name | Type | Driver dia. | Steam Pressure | Cylinder d. & s. | Tractive effort | Baldwin Built |
|---|---|---|---|---|---|---|---|---|
| | 1 | *Granite City* | 0-4-0ST | | | | | |
| G | 2 | *Mountain King* | 0-6-0ST | 45" | 140 lbs. | 16" x 24" | 16,200 lbs. | 1889 |
| 062 | 3 | *Boulder* | 0-6-2ST | 45" | 130 lbs. | 16" x 24" | 15,000 lbs. | 1890 |
| 062 | 4 | *Granite City* | 0-6-2ST | 49" | 180 lbs. | 17" x 24" | 21,700 lbs. | 1902 |
| 062 | 5 | *Monarch* | 0-6-2ST | 51" | 190 lbs. | 19" x 24" | 27,500 lbs. | 1909 |
| 062 | 6 | *Hercules* | 0-6-2ST | 51" | 200 lbs. | 19" x 24" | 28,900 lbs. | 1912 |

No. 2 was sold to Wetmore & Morse Company. Now scrapped. No. 3 was sold to M&WR RR. and became its No. 10; sold to Rock of Ages Corporation; now scrapped. No. 4 was stored in 1931, then sold to Rock of Ages Corporation in 1940. No. 5 is still in service. The name was removed in 1928. No. 6, *Hercules*, was later named *F. H. Smith* after its engineer, but this name was removed in 1937 upon his retirement. The engine is still in use with No. 5.

Data from Elwin K. Heath.

Company. Three well cars, Nos. 501, 510, and 1000, a caboose, and a small steam crane complete the list.

Rough granite totaling 102,477 tons was brought down from "The Hill" in 1939, on the trains of the Barre & Chelsea. To do this dangerous job over such grades, the engines are equipped with large capacity air pumps. The cars all have the most powerful air brakes obtainable, and the use of hand brakes on 75 per cent of the cars is required. As a further precautionary measure the engines are always at the lower end of the train and are run around the train at switchbacks to accomplish this. No car is allowed to be handled in a loaded train unless its air brakes are in perfect order, and constant check-up is both the rule and custom.

Until switch engines were purchased by such quarries in the area as Wetmore & Morse Company, E. L. Smith & Company, and the Rock of Ages Corporation, the Barre & Chelsea operated two crews daily, sometimes even on Sundays and holidays. Since the advent of the private switchers, however, only one crew is at work on the line during the day. Until about 1925 a B&C engine was used in the Barre Yards as a switcher, but when the yard was leased to the Montpelier & Wells River Railroad one of its engines took over the work.

Operations for the Barre & Chelsea are centered at Montpelier, where the main offices, shops, and engine house of the Montpelier & Wells River are located. Operations begin about 5 a. m. when one of the B&C tank engines leaves the M&WR engine house for Barre City. The engines are run light to Barre, and train crews and orders are picked up at that point. The Barre agent is in direct contact with the quarries and knows how many empties are required and how many loads are to be brought down to the granite manufacturers in Barre. After climbing the hill the train may be run in either direction on the loop depending upon which quarries are to be switched. Late in the morning the empties have been disposed of and sufficient loaded cars accumulated for a trainload down to Barre.

Train crews of the B&C are wholly B&C employees, holding no rights on the M&WR unless they previously worked for that road. Engine crews on the B&C are, for the most part, senior engineers of the M&WR.

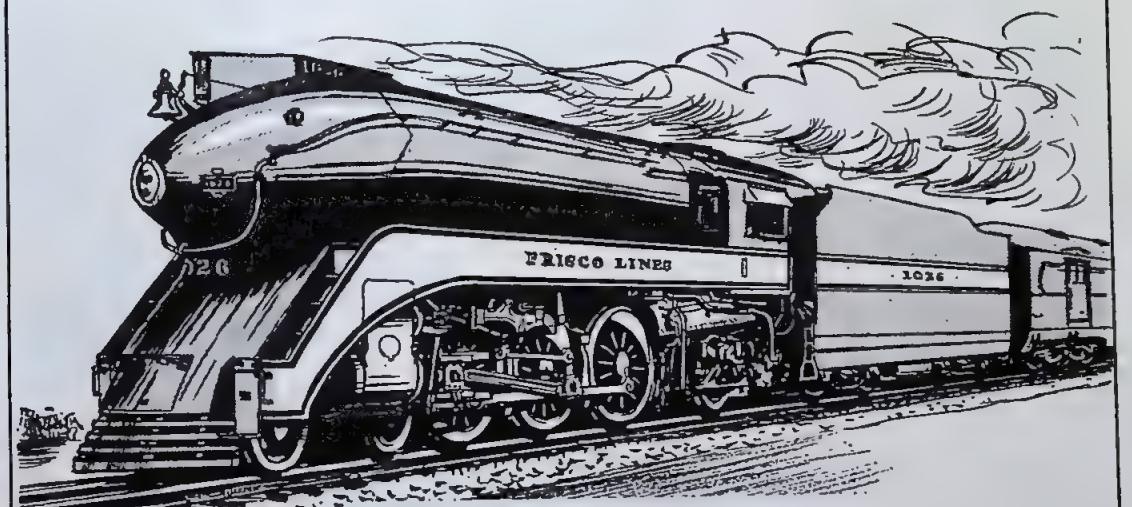
In November, 1937, the I. C. C. allowed the abandonment of 1.37 miles of the East Barre & Chelsea. Aside from this, the rest of the line is in use.

The rough granite, after reaching Barre, is either distributed among the many finishing plants, to be made into memorials and structural blocks, or is shipped, after being transferred from the special cars of the B&C, over the Montpelier & Wells River or the Central Vermont, to distant points in the United States.

As would be expected, the chief industry in Barre is to be found in the many finishing plants. While the entire population, consisting of nearly 12,000 inhabitants, share a common interest in this work, few are the ones who do not wax enthusiastic when the subject of the Barre & Chelsea Railroad is brought into the conversation.

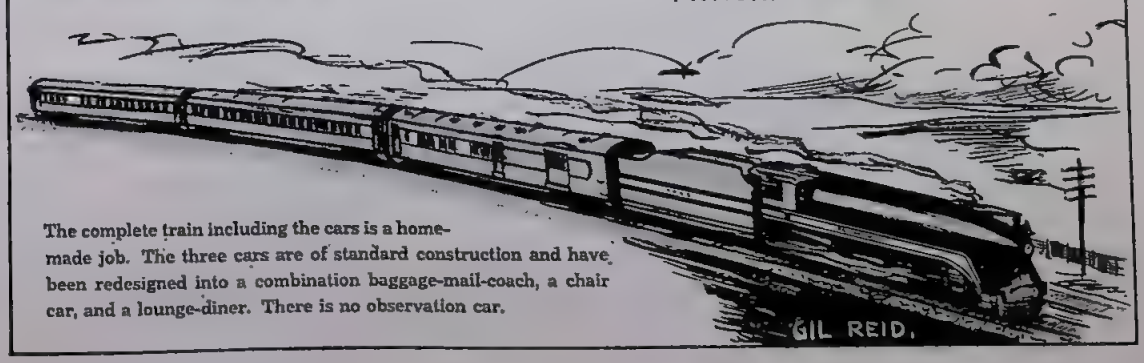
# THE *Firefly*

FRISCO LINES
ST. LOUIS SAN FRANCISCO RY.



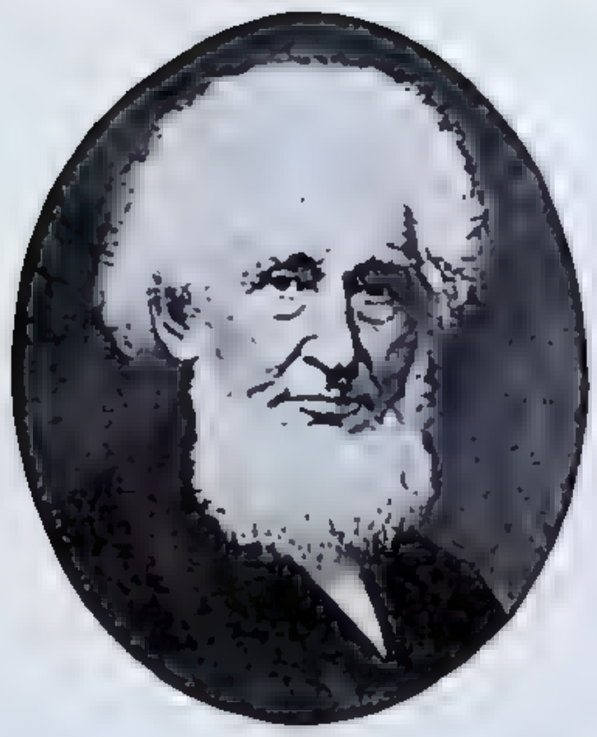

Although the *Firefly* makes nine stops between Kansas City and Oklahoma City, it averages 51.86 miles per hour for the entire 378 miles. Despite the sleek appearance of the engine, it is interesting to know that she was built by Baldwin in 1910! The Frisco rebuilt her completely at Springfield (Mo.) into the zephyr-blue and silver torpedo that is now the pride of the line.

The locomotive has 73" drivers, cylinders 24" in diameter and 28" stroke, Baker valve gear, a weight of 447,200 pounds including the tender, and a tractive force of 37,600 pounds. The combined length of engine and tender is 84'-5" and the height is 15'-4½". Tender carries 3800 gallons of oil and 10,000 gallons of water. Placed in service March 29, 1940.




The complete train including the cars is a home-made job. The three cars are of standard construction and have been redesigned into a combination baggage-mail-coach, a chair car, and a lounge-diner. There is no observation car.

Wootten



Winans

Millholland

# *Reading Locomotive Growth*

## ★ From *Old Ironsides* to streamlined *Crusader*, new 108-page book gives history of Reading power.

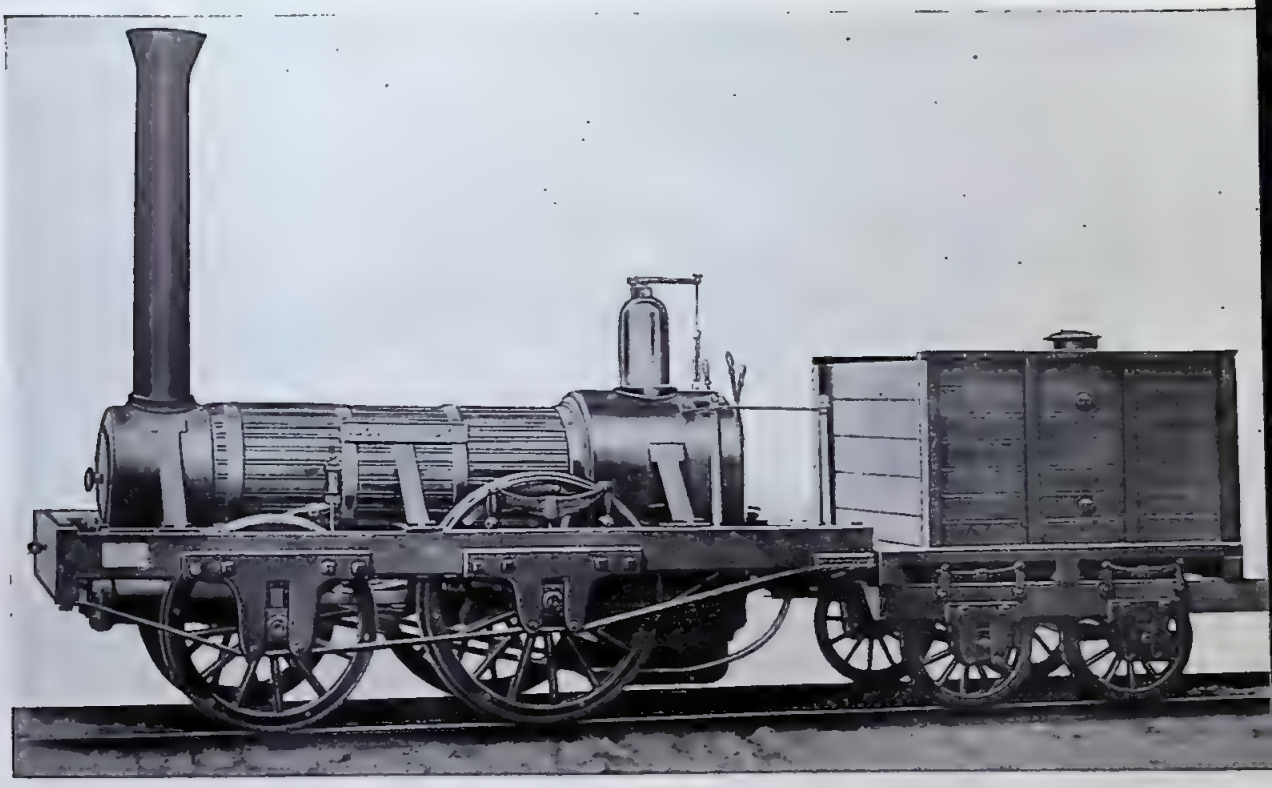
The history of motive power on the Reading is the history of locomotives in the United States. *Old Ironsides*, the first locomotive of Matthias W. Baldwin, was built in 1832 for the Philadelphia, Germantown & Norristown Railroad, now part of the Reading. Ross Winans, the Baltimore locomotive builder, constructed 47 of his Camels for service on the Reading. James Millholland, whose inventions played such a part in the mechanical development of the locomotive preceding and during the Civil War, was master of machinery of the Philadelphia & Reading from 1848 to 1866. John E. Wootten, general manager of the P&R, contributed his name as a common adjective in today's locomotive terminology by inventing the Wootten firebox, especially designed to burn waste hard coal.

This typical motive power history, from *Old Ironsides* up to the streamlined *Crusader* engines and the experimental poppet valve 616 and 3010, has been put between two covers by the Reading publicity department as *A Century of Reading Company Motive Power*, available for $1.25 from the Publicity Department, Reading Terminal, Philadelphia, Pa. In this way the railroad recognizes the public curiosity about the machines which whisk people and goods from place to place, and the curious public is evidencing its appreciation of the Reading Company's well done book by ordering copies "like hot cakes."

Several hundred photographic illustrations are the *piece de resistance* of the 108-page book, and the captions contain just the sort of information the railfan wants. No wonder, for many a prominent amateur railroad historian and photo collector assisted in the compilation and editing. The facts about each illustration are not just dry statistics, but such informal roundhouse chatter as this about the Columbia (2-4-2) type: "These engines were inclined to be 'slippery' and the large leading truck wheels were considered dangerous at high speed, and for these reasons the Atlantic type soon replaced them."

Practically every class of locomotive the road had or has is illustrated and described, and the pertinent data as to what happened to the locomotives (and in many cases why) is not overlooked.

The Reading locomotive photos and data on following pages are excerpts from *A Century of Reading Company Motive Power* and will indicate something of the nature and quality of this new railfan book, a book which we find it impossible to review adequately in words alone.



## First by Baldwin, first on the Reading.

*Old Ironsides* was the first locomotive built by Matthias W. Baldwin, founder of the Baldwin Locomotive Works. It was constructed for the Philadelphia, Germantown & Norristown Railroad in 1832 and was the first engine to run on any portion of the present Reading system. It was also the first locomotive to make scheduled runs within the state of Pennsylvania. The model pictured above is of *Old Ironsides* as originally built and the drawing below shows *Old Ironsides* in service. Horses were at first used on the railroad, but on November 23, 1832, the locomotive was tried and three days later was put into regular service, replacing some of the horse-drawn passenger trains. However, a public notice of that event reads, " . . . the locomotive . . . will depart daily, when the weather is fair . . . and cars drawn by horses will depart . . . when the weather is not fair." The new iron horse stayed faithfully on this job until 1846, and then it was apparently sold.

## *Hiawatha.*

Millholland-designed, the *Hiawatha* was a remarkably successful passenger locomotive built at the Reading shops in 1859. It established a general design which continued until the advent of the Wootten boiler in 1877. The round-cornered, round-roofed cab was used by Millholland on many of his locomotives. *Hiawatha* held the Reading total-mileage record of 720,727 miles in 1880, was retired in 1883.

## *Pennsylvania.*

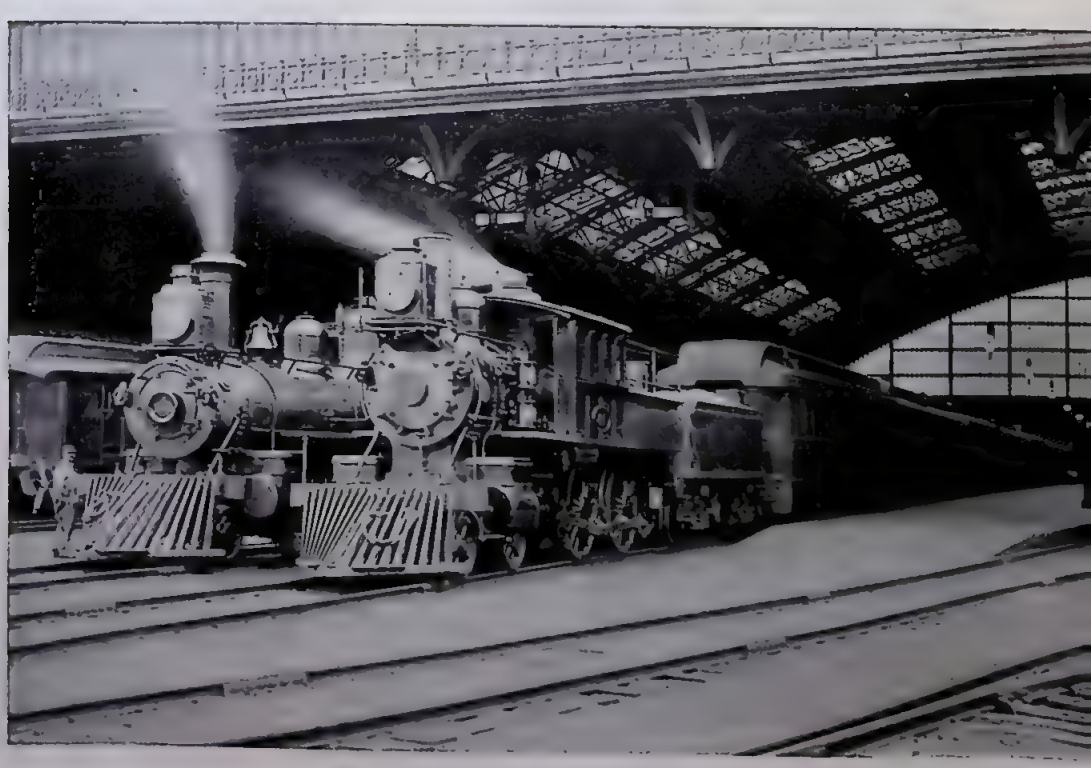
This unusual locomotive, designed by Millholland and built at the Reading shops in 1863, did all its 22 years of service on the one mile of .9 per cent Falls Grade in Philadelphia, where it was used in pusher service. The water supply was carried in the tank on top of the fire box and in two additional side tanks. No coal was carried, as firing was done at the end of each short, but strenuous, trip.

## Lovett Eames locomotive.

The Lovett Eames was the 5000th locomotive of the Baldwin Locomotive Works and was fitted with a traction-increasing device by which weight could be shifted from the trailing wheels to the drivers for greater adhesion while starting. It was later sold to Lovett Eames to demonstrate his vacuum brake and decorated as shown.

## The new Reading Terminal.

The present Reading Terminal in Philadelphia was completed in 1893 and its massive train shed had accumulated only two years of soot when this picture of 1202 and 44 was taken. Rogers-built 1202 was taken over by the Reading with the Pennsylvania, Poughkeepsie & Boston, and No. 44 was built by Baldwin for the Reading.

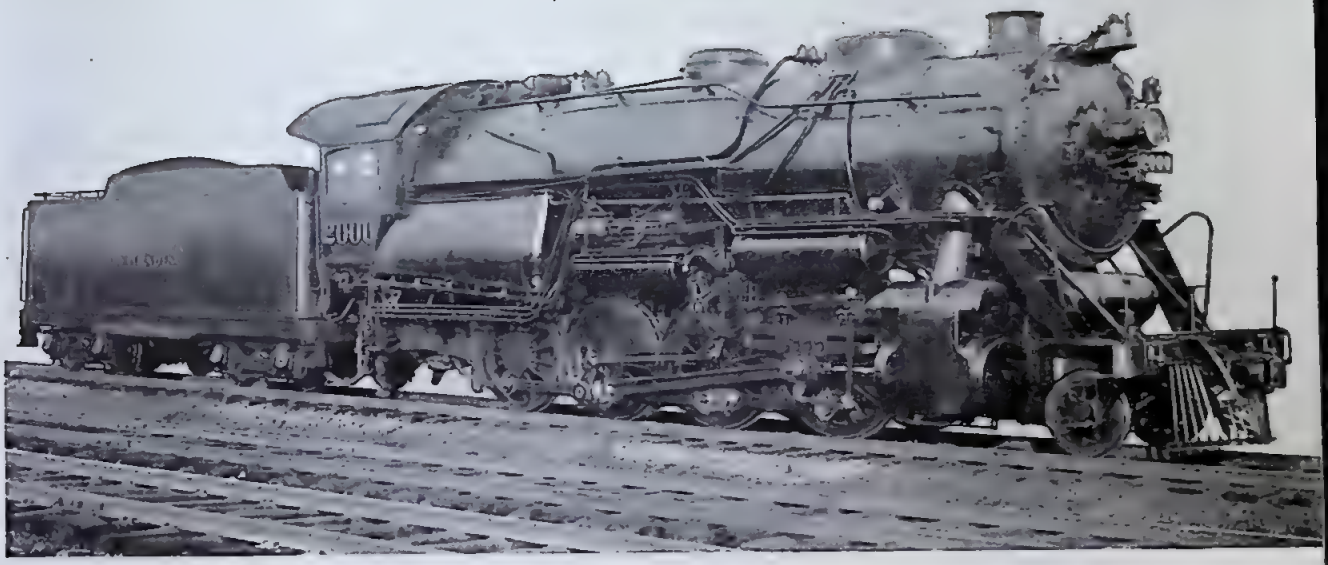


## Mainville Bridge.

The Reading had been numbering its engines for only one year when, in 1872, it acquired the Catawissa Railroad, in east-central Pennsylvania, and made it the Catawissa Branch. This bridge was at Mainville, just east of Catawissa, and its site is now a 405,253-cubic-yard fill. The locomotive on the bridge is No. 249, formerly the *Valentia*, built by Baldwin in 1869. Reading had by this time standardized its motive power in considerable degree.

## Looks fast and was fast.

The 1027 had the honor of hauling the fastest train in the world in the late 1890's. Two Atlantics, 1026 and 1027, were built by Baldwin for the Reading in 1896, especially designed to pull six-car passenger trains from Camden to Atlantic City, 55½ miles in 50 minutes, and they did it with time to spare. Dispatcher's sheet for July and August, 1897, shows No. 1027's average running time as 48 minutes, a start-to-stop average of 69.3 miles per hour.



## Heavy Consolidation.

The Reading I-10sa's rank among the heaviest Consolidation type locomotives ever built, engine weight 314,950 pounds. Fifty of these were built by Baldwin between December, 1923, and January, 1926. No. 2000 was the first. She was designed to burn a mixture of hard and soft coal mechanically stoked. The lettering Philadelphia & Reading was discontinued in 1924, when the company name was changed.

## Still a locomotive.

How can a locomotive be streamlined and prettied up to please the public and still be a locomotive? The Reading has given a good answer to this problem. No. 178 represents the latest class of Pacific type locomotive on the Reading, one of five G-2sa's built by Baldwin in 1926. Like others, she has been cleaned up and her skyline ironed out to make a neat, attractive engine with the machinery showing.

## Locust Point, shipping outlet for the Baltimore & Ohio in link and pin d

THIS photo, according to J. J. Tatum, assistant chief of motive power of the Baltimore & Ohio, was taken in the early 1880's. The pot-bellied iron coal hoppers, which were still the principal carriers of the B&O, had drop doors on their bottoms for unloading. Their capacity was 40,000 pounds, although one of 80,000-pound capacity was built as an experiment.

The first all-steel hoppers used on the B&O were built in 1898 for the Pittsburgh & Western, which was absorbed by the B&O a few years later. Their capacity was 80,000 pounds. The N-8 and N-9 types, of 95,000- and 100,000-pound capacity, were the first built for B&O proper, in February, 1899. At the right of the picture are a few wooden gondolas.

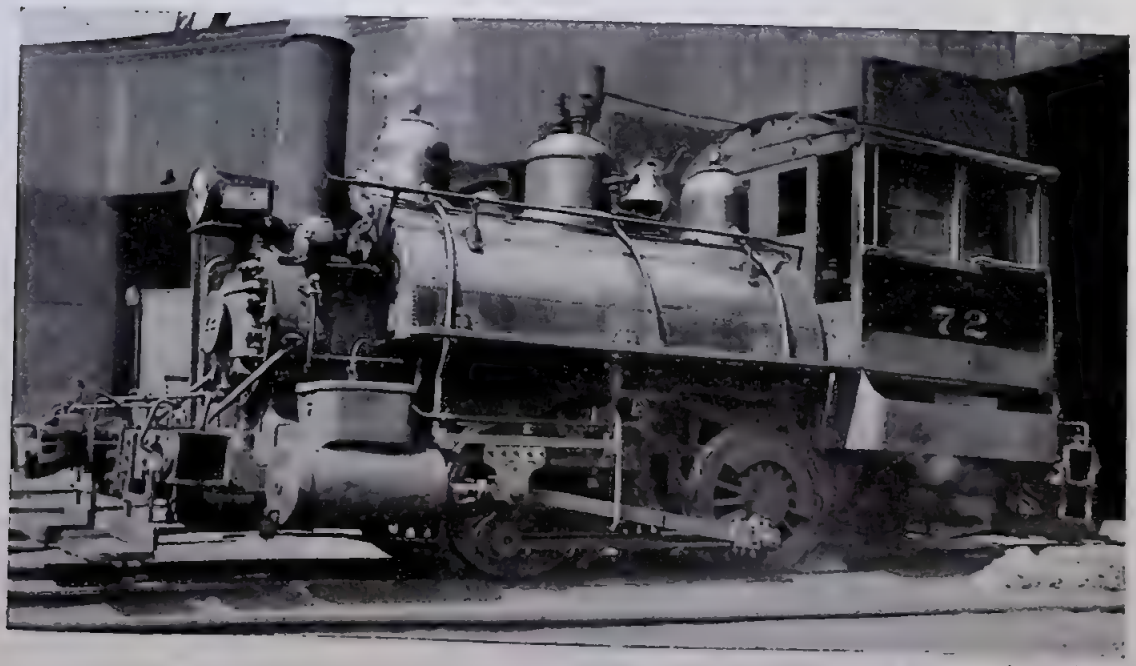
Notice the huge "B—O" initials on the box cars at the right. The sphere between the two letters represented a globe, the implication being that B&O circled the world.

The huge wooden grain elevators were burned in the fire of 1922 and were shortly replaced by the great steel and concrete elevator that is the landmark of modern Locust Point, which is now doing an exceptionally large export business.

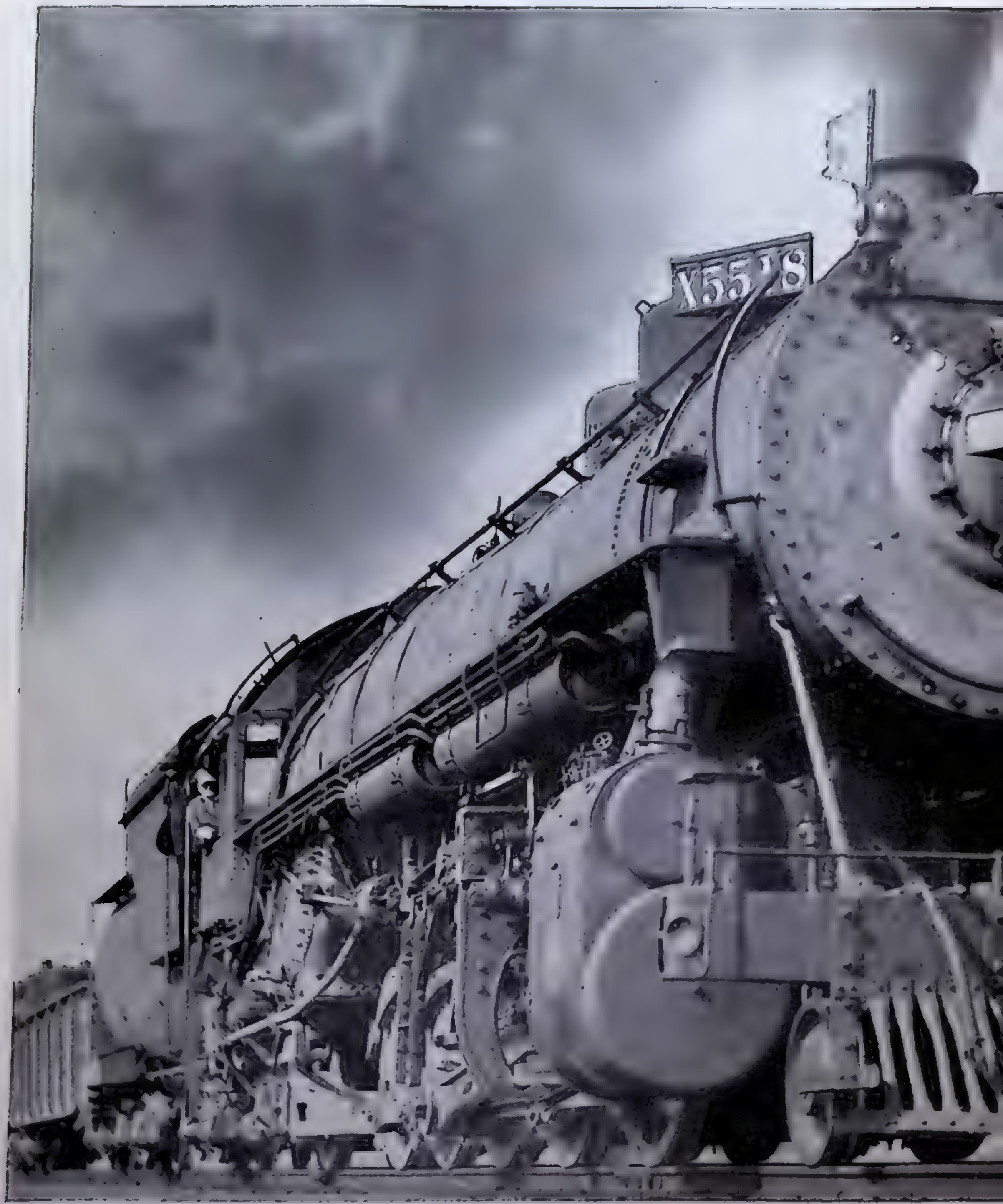
A rare type of engine is that shown in the extreme right—an old saddletank switcher, the tank being built around the boiler so that the locomotive would have a short wheelbase to negotiate sharp curves. A saddle tanker still used on the B&O is shown in the photo at bottom right. This engine is doing duty at the Glenwood roundhouse as a turntable goat.

Courtesy Baltimore & Ohio.

ys.




A contributor.




## Action in Cajon Pass.

Cajon Pass! Magic words to the man who travels the West by rail. Here the Union Pacific and Santa Fe on joint tracks climb over the San Bernardino Mountains on the way east and north from Los Angeles. No. 5518, UP 2-10-2, is at the head end of an eastbound freight at this scene of titanic action.

# *Transcontinental Tour*

★ Maximum travel for your time and money is all in knowing how. Railroad tours are best buys.

*By Harold M. Mayer.*

Railroad Photographs, 47 Royal St., Allston, Mass.; by G. M. Best.

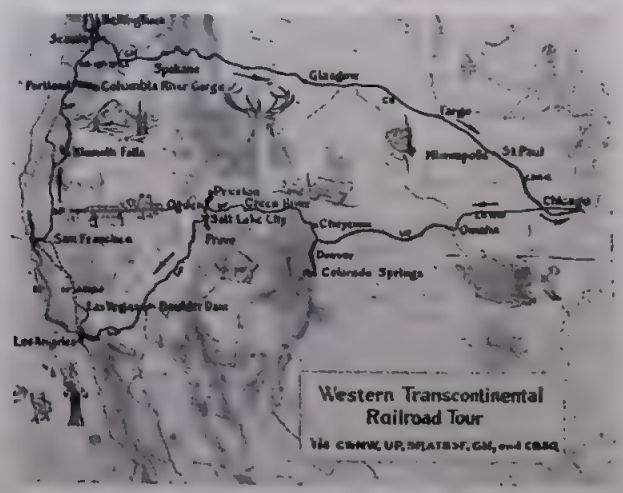
THE steel rails of the American railroads bring three million square miles of United States within easy access of your own front door via a single interline ticket. Pack your bag and go! Scarcely a village, scarcely a point of scenic interest, is far off the steel bond which ties the nation together.

The competition between various railroad companies has built up a rate schedule which offers the most intriguing routes and combinations of routes. We can go by roundabout ways or direct, and at the same price. We can return on a line different from that used in the going direction. And no matter what routing we take it's almost sure to cost less than the standard 2-cents-a-mile coach fare or the standard 3-cents-a-mile first class fare considering mileage actually traveled.

We've all heard of the magnificent coast-to-coast circle trip, from your home to both New York and San Francisco for only $90 coach or $135 first class. But for lesser amounts one can take Western or Eastern circle trips of an entrancing variety, only not so extensive. For

## A lot of trip for $65.

Make the Western circle tour shown on the map for only the standard Chicago-San Francisco round trip fare of $65 in coaches, $74 good in tourist Pullman, or $90.30 first class. This includes most of the side trips. The particular trip described is one of countless routings for the same price.




Linn H. Westcott.

example, from most Midwestern cities the rates to all Pacific Coast cities are equal, whether routed via Los Angeles, San Francisco, or Seattle. Since railroads to these various cities all want their share of the Western business, one can pick his route and still pay only the standard fare via the shortest line. Thus, for a direct round trip fare to San Francisco, one can go via such a meandering route as New Orleans and Los Angeles, and return through Portland and Seattle. For an arbitrary $5 additional one can even return through Canada.

The choice of railroads, cities, and scenery along the way is almost infinite and the choice depends upon individual preference. Let's imagine ourselves on a railroad vacation trip making use of the short line round trip fare to San Francisco from Chicago (or other Midwestern city). The round trip ticket out of Chicago is only $65 coach, $74 tourist Pullman, or $90.30 first class (berth extra).

We have been careful to plan our route in advance, in order to secure maximum advantage of our privileges in making out the ticket. Armed with about a yard of coupons which constitute an interline Western Transcontinental ticket or the Western portion of a Grand Circle ticket which carries us from coast to coast, we leave the "gateway" point of Chicago or St. Louis, and in the morning find ourselves in the Denver Union Station, with the Rockies peeking into our Pullman berth.

We arrived in Denver by Union Pacific, even though Denver is not on the main transcontinental route of that railroad. The reason we are permitted to do this without extra charge is that the Burlington and the Denver & Rio Grande Western operate a through transcontinental route, connecting points in common with the Union Pacific's route, but going through Denver.

Since Denver, Colorado Springs, and Pueblo are all "common points" along the base of the Colorado Rockies, all taking the same basic fare, and reached by several competing lines, each line furnishes a free side trip on certain through tickets, from one of these three cities to any other, regardless of the point which is on the route of the particular road. Thus we have a sidetrip coupon entitling us to a free round trip between Denver and Colorado Springs.

We board a D&RGW train at Denver, and in two hours, after viewing the magnificent sweep of the Front Range all the way, we are at Colorado Springs. We have traveled over a section of the "pooled route" which extends from Denver to Pueblo. Here the Santa Fe, Rio Grande, and the Colorado & Southern have pooled their trackage, so that all southbound trains operate over the Rio Grande tracks and all northbound trains over the Santa Fe tracks a half mile or so to the east, regardless of the road which operates the train.

From Colorado Springs we make short side trips (at a slight additional cost, since they are to points not on competitive through routes) to the top of Pike's Peak on the Manitou & Pike's Peak cog road, and to Cripple Creek over the Midland Terminal, which is the last remaining stretch of the once extensive Colorado Midland. Before returning to Denver we view the other famous sights of the region: Manitou, Garden of the Gods, and Cheyenne Mountain. Then back to Denver.

Having seen the Rio Grande system previously, we pass that up and return to the Union Pacific for the westward continuation of our journey. We go northward on a local train to Cheyenne, back on the UP main line. Here we view the vast shops and yards of the system, and witness a remarkable demonstration of railroad efficiency in the servicing of several crack passenger trains at the station in a few minutes.

Continuing westward on the main line, we are scarcely aware of the crossing of the Continental Divide, so favored by physiographic conditions is the "Overland Route." We stop off at Green River, and watch with great interest the splitting and combining of trains, for it is near here that the line to Portland diverges from the line through Ogden. And at Green River we take time out to go fishing, a thousand miles from the ocean, but deep-sea fish nevertheless! The fish are fossils in the famous Green River shales which surround the town and are interesting for their fine stratification and beautifully-eroded shapes.

From Green River we continue across the desert to Ogden. Since all through trains except extra fare streamliners operate west of Green River at night, and we want to see as much as possible by day, we ride mixed train 319, the *P&P Special*, as it is locally called (P&P meaning Pigs and People). Sixty carloads of hogs for the Salt Lake market and only two human passengers! You and I.

Railroad Photographs, by G. M. Best.

Joseph Schick, Keensbury, Colo.

## It's warm in Green River.

Early morning in Green River, Wyo., with a Union Pacific 4-12-2 three-cylinder simple locomotive in action on a fast freight. Green River (population, 2589) is a division point on the busiest section of the UP, a double track which funnels trains from all western points across the mountains for either the Kansas City or Omaha lines—20 passenger trains a day here.

## And cool in Manitou.

Just six miles west of Colorado Springs on the way to Cripple Creek via Midland Terminal Railway is Manitou, a small town which might not be known except for its springs and that it is the eastern terminal of the cogwheel Manitou & Pike's Peak. The 8.9-mile, 7547-foot climb takes an hour and 20 minutes. Scenery on the way up, as shown, is excellent; from top, even better.

The trip from Green River to Ogden with the hogs, we decide, is well worth the trouble, as we get into contact with the railroad operational problems as well as with the climate. Only 140 degrees in the shade, and no shade! Every few miles the train stops, the hoses from a water tank are turned on the hogs, and the train waits for a meet on the center passing tracks, while a hotshot string of reefers speeds California vegetables and fruits to Eastern markets, or a sleek streamliner hurries its passengers to their vacations.

At Ogden we view with interest the old shore lines of ancient Lake Bonnerville, now high on the mountainside in the form of terraces or setbacks. We ride the interurban lines which cover the Salt Lake oasis from end to end: the Utah Idaho Central north from Ogden, the Bamberger to Salt Lake City, the Salt Lake & Utah, and the Salt Lake, Gar-

field & Western from Salt Lake City. And at the latter city we marvel at the geometrical pattern of the well-kept streets, and at the numerous evidences of the great Mormon experiment in community planning.

Salt Lake City to Los Angeles is one of the greatest stretches of desert railroad in the world. Scarcely a town interrupts the vast extent of this barren land—the Great American Desert. So sparse are the potential sources of traffic that not until 1905 was the Los Angeles & Salt Lake Railroad, that portion of the UP over which we now travel, completed. And so hot is the desert in Summer that we pause to wonder how uncomfortable the long ride must have been before the days of air conditioning, or still earlier, when covered wagons were the only means of transportation. We leave Salt Lake in the morning on the *Challenger*, pass Lund, merely a junction in the desert but the gateway to several world-famous national parks, and arrive at Las Vegas in the evening, just in time to see one of the far-famed Las Vegas nights.

At 'Vegas we take advantage of the opportunity to make a very inexpensive sidetrip to Boulder Dam, just a few miles away across the desert. The Union Pacific provides bus service, and government engineers act as guides. We explore the power plants, the shafts inside the huge concrete structures, and the canyon just below the dam, then take a boat ride on Lake Mead, back of the dam. But the heat forces us to leave immediately afterward, and we catch the next Los Angeles-bound train from Las Vegas, crossing more of the desert, viewing cactus plants, dropping down spectacular Cajon Pass, and then, lo and behold, we are in Southern California, where the desert blooms like a rose, or, rather, like an orange grove.

Los Angeles itself holds considerable interest for the railfan, aside from the better-known sights which the movies have publicized around the world. We do not omit a careful inspection of the new Union Station, with its unusual Spanish architecture and its many world-famed transcontinental trains. Here we sidetrip on the Pacific Electric, riding over several hundred miles of this remarkable electric railway to Venice, Ocean Park and Santa Monica, to Hollywood and through Cahuenga Canyon to Van Nuys, to Colton, to Glendora, to Sierra Madre, Newport and Balboa, to Long Beach, and to the harbor at Wilmington and San Pedro, where we see the Harbor Belt Line Railroad.

But we are not yet halfway on our trip. We head for San Francisco. Here we have the choice of several routes: the coast line of the Southern Pacific, with its famous *Daylight*, its oceanfront route, Santa Margarita grade, and authentic Spanish atmosphere; the San Joaquin Valley line, also of the SP, with its Tehachapi Loop; or the valley line of the Santa Fe with its bus connections at both ends.

In San Francisco we ride the last of the remarkable cable cars up and down the many hills. Cable cars were first installed in Frisco, last to be ripped up. There are two large trolley systems, and across the Bay Bridge runs the Key System to Oakland. Here we visit the famous Oakland Mole, terminal of the Overland Route. We ride back and forth across the bay on the colorful Southern Pacific ferries, then take a short trip on the Northwestern Pacific to Santa Rosa, where one may visit Burbank's garden, or we continue over the mountains to Willits. Truly, San Francisco is worthy of being the destination of any transcontinental trip.

But we must be on. Ahead of us is one of the most spectacular railroad rides in all the world: the Shasta Route of the Southern Pacific from San Francisco to Portland. Leaving the city on the Golden Gate by SP ferry, with a backward glance at the remarkable skyline, we step aboard a local train at Oakland Pier, cross Carquinez Strait on a huge bridge which only a few years ago replaced a remarkable car ferry, continue over miles of wooden trestle built on the soft delta muds of the Sacramento and San Joaquin rivers, and connect at Sacramento with the *West Coast* which left Los Angeles enroute for Portland the night before. All day we ride northward through the Sacramento Valley. Palm trees give way gradually to more Northern types such as oaks; orange groves are replaced by corn fields; the symmetrical Marysville Buttes are visible to the west, and gradually the valley becomes narrower and narrower. By late afternoon we are no longer in a wide valley, but moving slowly up a steep, curving grade, on a narrow shelf, with high mountains on one side and a deep yawning canyon on the other. The train is double-headed, and we can see the locomotives winding their way

Jack Whitmeyer, 3450 Russell St., Riverside, Calif.

## Steam and electric power on the West Coast.

The Pacific Electric Railway operates the world's largest electric interurban system in Los Angeles and vicinity, with 1075 miles of track networking over an area of 5500 square miles. Some passenger service has been abandoned, but 1200 trains a day still run between two downtown terminals (one subway and one elevated) and suburban points. Train shown is a Railroad Boosters special on the Santa Ana River bridge, now used for freight only. The *Daylight* (below) is standard bearer of the Southern Pacific on the Coast Line between Los Angeles and San Francisco, and the morning and noon trains carry an average of about 1500 passengers daily. Station at Mayfield is the oldest original railroad building in the West.

Railroad Photographs; by Lieut. E. W. Bewley.

around the sharp curves. A huge scar on the landscape: Shasta Dam, under construction! Soon trains will go over forty-odd miles of brand new railroad made necessary by the submergence of the old route in a lake back of the dam. Just at sunset we see the towering peak of Mount Shasta, its mantle of snow catching the last glow of the sun, its lower slopes in the deep shadows of approaching night, flung from the cliffs across the valley of the Sacramento headwaters.

We leave the train at Klamath Falls, in order not to pass through any of the route after dark. Crater Lake is but a few miles away. Morning, aboard the northbound *Cascade,* brings more spectacular scenes: deep-blue Klamath Lake, miles upon miles of steep mountain slopes mantled with giant fir and spruce forests, symmetrical volcanic cones in the distance, and steeper and sharper curves than one would think possible on a standard gauge railroad. In early afternoon the fertile Willamette Valley is traversed, and we reach Portland, our next stopover.

From Council Crest, at the west end of what was a most interesting streetcar ride up a steep grade through a beautiful residential district, we view the vast expanse of the Willamette Valley, the Columbia River, and the whole sweep of the Cascades with peak after peak in the distance, all perfectly formed volcanic cones. In riding around the city we see huge trainloads of lumber entering the mills along the river, and tremendous log rafts being floated, only to be cut into large boards, loaded on ships, and sent the long way around through the Panama Canal.

From Portland we make a side trip along the Union Pacific's Columbia River line, viewing Mount Hood, Bonneville Dam, Multnomah Falls, and the Dalles, where the great river breaks through the Cascades in its rush to the sea. We see the two great railroads, the Union Pacific on the south bank and the Spokane, Portland & Seattle on the north, competitors in the use of the Columbia River Gorge to reach tidewater at Portland.

Then northward along the double-tracked pool line of the Union Pacific, Northern Pacific, and Great Northern, to Seattle. Along the way we see the spectacular docks and lumber yards on the Willamette and Columbia, the planned town at Longview (for employees of Long-Bell), the lumber cities of Kelso, Centralia and Chehalis, whose very names give one the wanderlust. All the way we pass long trainloads of Douglas fir, of spruce, of cedar, all moving downgrade to tidewater and the busy sawmills. From below Tacoma we get an impressive glimpse of Mount Rainier, and then suddenly burst upon the blue expanse of Puget Sound with the snow capped Olympics in view just across the way. The railroad here is perched on a narrow artificial shelf cut near the water's edge, with many curves and a few tunnels made necessary by the configuration of the shoreline. At Tacoma we see the gigantic smokestack of one of the world's largest smelters, which receives ore from Montana, Alaska and the far-away East Indies. And we glance at the world's greatest monument to a miscalculation, the remains of the ill-fated Tacoma Bridge. A short run, then, across fertile dairy farms, and into Seattle.

In Seattle, as in San Francisco, there is much to capture the interest of the railfan. Two passenger stations stand side by side, one of them electrified, the Western terminus of the Milwaukee Road, end of the run for the *Olympian.* There are tunnels and bridges galore. One tunnel, that of the Great Northern under the downtown district, provides access to the Smith Cove Piers, one of the world's large ocean terminals, built by James J. Hill when he envisioned a great circle route to the Orient under his control.

From Seattle we take advantage of another free sidetrip. Since our ticket reads via Great Northern on our return east, we get an extra trip on that road to Bellingham, along the shore of Puget Sound. Here we are fascinated by the tunnels, beaches, the Olympic Mountains across the water, and by glimpses of lumber-laden freighters, long lumber trains, car floats, and Orient-bound liners.

Returning to Seattle, we soon leave again, this time to sample a few boat trips on Puget Sound. First a streamlined ferry takes us to Bremerton, with its navy yard, then on a trim Canadian Pacific Liner to Victoria and Vancouver, with their authentic English atmosphere. If we hold a first-class or tourist ticket the side trip to Vancouver is free and should be included in our original routing.

But time ticks past and we must begin our return. The *Empire Builder* leaves in the evening. Too bad, as we want to see the Cascades by daylight. So we take the day local to Spokane.

Leaving Seattle, we repeat part of our previous trip through the Seattle tunnel, past the Lake Washington Ship Canal and Smith Cove, along Puget Sound to Everett. Here the main line separates from the line to Bellingham and Vancouver, climbs up a stiff but short grade, makes a semi-circle around the town, and veers off for the East. Our locomotive is working hard, for we are already climbing the west slopes of the Cascades. The forests become larger and denser, and soon long horseshoe curves and snowsheds come into view. We see on a mountainside a long series of gashes in the forest, and realize that it is the old railroad line across the summit of the Cascades. We pause briefly at Skykomish and then proceed, this time with an electric locomotive. Suddenly we are in Cascade Tunnel, longest railroad tunnel in America. We have a seat in the reserved section of the observation car (coach tickets honored on payment of nominal seat charge), and look backward at the light streaming through the portal, which soon becomes a pinpoint and then disappears, just as we emerge into daylight again. But what a contrast! The east slope of the Cascades is not forest-covered; it seems barren by contrast. As we smoothly descend into the Wenatchee Valley, we see the world-famous apple orchards. A pause at Wenatchee to drop the electric locomotive for an oil-burning steam engine, and then past Appleyard, where trainloads of apples are assembled for the Eastern markets. Over the Columbia River into the Coulee country, then across the wheat fields of the Palouse, to Spokane, where we lay over night, catching the *Empire Builder* for the two-day ride along the Kootenay, through the Belt Mountains, past Glacier Park, across the Great Plains, the wheat fields of the Dakotas, and the forests of Minnesota, to St. Paul, where, after another night stop, we catch the *Zephyr* for the ride along the Mississippi River and across northern Illinois to Chicago.

Nearly 7000 miles for $65. What a bargain, and what a vacation! Yet this is only one of the many possibilities resulting from the simple fact that more than one railroad may connect the same two points.

Far away the low moan of a locomotive whistle penetrates the night air. We have visions of mountains, of plains, of oceans, of miles upon miles of track—240 thousand of them. What are we waiting for? Where's that *Official Guide*? Come on, let's go!

Great Northern train No. 1 near Spokane, 1898. Collection of Albert Farrow, 136 10th St. S., Auburn, Wash.

# *Illinois Terminal Railroad*

★ **Only surviving typical interurban saw the writing on the wall—now a Class 1 freight and passenger line.**

*Trains Staff.*

THIRTY-FIVE years ago a young man entering the railroad business was advised to study railroad receiverships if he wished to make money in railroading. Now that young man is an officer of the Illinois Terminal Railroad and finds that the advice doesn't fit, for the Illinois Terminal is one of the very few successful and solvent large interurban systems.

From St. Louis the Illinois Terminal reaches out north and east over a fertile agricultural land, dotted with quarries and mines and built up with large industries. The world's biggest glass container plant is on the line at Alton, Ill. Caterpillar Tractor Company is on the line at Peoria. Coal mines have cropped up in the corn fields here and there. Part of the 481 miles of main line is belt and switching connections in and near St. Louis, invaluable for routing carload freight traffic. Along 375 miles of track glide the big orange passenger cars, carrying air conditioned reserved seat lounge and dining cars on the longest through interurban run in America, St. Louis to Peoria, 170 miles. This huge electric system uses 23 steam locomotives in addition to its straight electric, oil-electric, and trolley-storage battery motive power.

Mile post zero is in the cavernous basement of 710 N. 12th Blvd., the Central Terminal Building in St. Louis. This modern office and warehouse building was completed in 1931 in connection with a private right of way which took cars off the St. Louis streets and cut 10 minutes from running time. Waiting room is on the first floor and a huge elevator lowers passengers to the train level. Freight tracks also serve the building, and directly north the subway runs through the basements of two newspaper buildings to which newsprint is delivered via Illinois Terminal. After a brief block or so at street level the line climbs to a steel elevated structure leading to McKinley Bridge, the only Mississippi River crossing at St. Louis owned and used by a single railroad. The bridge also has a roadway for trucks and automobiles on a toll basis and contributes substantially to Illinois Terminal revenues.

The St. Louis terminal improvement typifies the policy that has kept the ITR profitable while many another big interurban system lost money, cut service, and finally abandoned. Fifteen years ago this company saw the writing on the wall and worked out the measures an electric railroad would have to take to stay in business in spite of auto, bus, and truck competition. Present annual operating revenues of around $6,000,000 place Illinois Terminal well in the Class 1 bracket and attest to the wisdom of the forward looking management.

Major difference between the successful Illinois Terminal improvements and improvements made by many of the electric roads that are no more, is that the ITR planned for a heavy duty freight railroad, not just a faster or smoother passenger carrier. The officials realized that future revenue would have to come in largest proportion from freight—heavy carload freight, not just the package freight which most interurban lines were carrying in motor dispatch cars. Belt lines were constructed to avoid city street running in Springfield, Edwardsville, Venice, Granite City, Decatur, Champaign, and Urbana, and allow operation of long freight trains behind the powerful Class C and D electric locomotives. The latter type of locomotive has a rated tractive effort of 64,000 pounds, more than most Mikado type steam locomotives, and can handle 1700 tons over much of the main line.

The rebuilding of the main line to handle long freight trains (50 or 60 cars is not uncommon) curiously enough saved a useful and busy passenger service. Many another interurban line with as much passenger revenue as ITR went out of business because

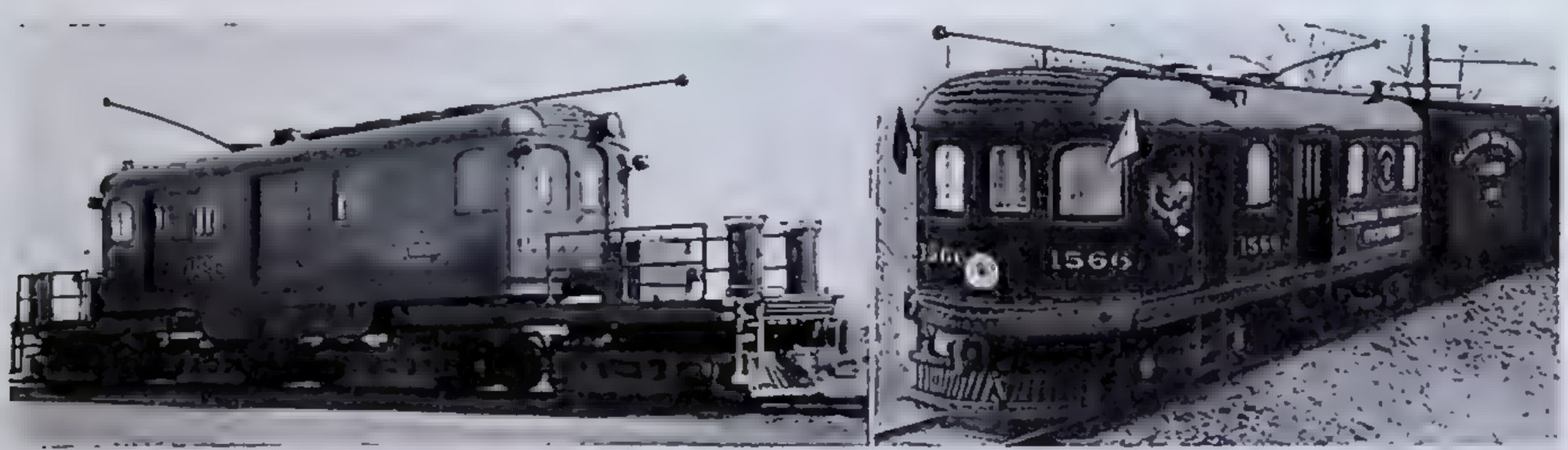
Linn H. Westcott

## This is the Illinois of the Illinois Terminal Railroad.

Take a big slice of central Illinois, butter it thoroughly with 3500 industries, with coal mines having an annual production of five million tons, and tie it all together with a local railroad designed to serve the local communities and industries rather than the long haul. Throw in for good measure terminal trackage at East St. Louis connecting with every other railroad, and a railroad-owned bridge and private right of way into St. Louis itself allowing not only fast passenger service, but the freight terminal nearest to the center of the city. There you have the makings of a successful railroad business. Heavy cross hatched lines on the map indicate electric lines of the Illinois Terminal, plain heavy lines the ITR steam lines. Dashed lines indicate abandonments, which have been very few. The lighter lines indicate other railroads.

freight trains could not be run around sharp city street curves, and passenger revenue alone would not pay fixed charges. Illinois Terminal, with both heavy freight and passenger revenues, is doing quite well. The principal passenger business is between St. Louis and Peoria, the only railroad passenger service between these cities. Six trains a day each way make the through run, two of them named limiteds with deluxe lounge cars. Until a year ago a night train carried a bedroom sleeper, but 1.8 passengers a trip weren't quite enough. The run is so short that Peoria business men, down to St. Louis for the day, preferred to leave on the 6:45 and get home for a night's sleep.

Main line passenger service also includes trains between Springfield and Danville, 122 miles, and from Peoria to Decatur, 82 miles. In the larger cities Illinois Terminal passenger stations are modern, clean, attractive buildings. The Peoria terminal is typical. It is a neat concrete and brick structure, housing not only the station facilities but offices as




Illinois Terminal.

**Freight is the life blood of a railroad treasury.**

As powerful as most steam freight locomotives are the 70 and 71, first of Illinois Terminal's Class D locomotives to come from the Decatur shops. Not much less powerful are the numerous Class C freight haulers, of which the 1583 is typical. The 1566 is a typical light electric locomotive from the days of the old Illinois Traction System, which operated the major electric portions of the railroad before a consolidation in 1928. Notice similarity of cabs. The two trolleys on each end of the 70 are needed to pick up the heavy current drawn by the eight 225-horsepower motors. Maximum running speed is 50 m. p. h.

Illinois Terminal.

Linn H. Westcott.

**Power and track and trolley wire.**

Entering Lincoln, Ill., from the south, the traveler in an Illinois Terminal observation car sees this view of a substation and its maze of wires, clustered near a railroad crossing. The other railroad is the Illinois Central's Havana Branch. The semaphore arm points inward instead of outward, this being standard on electric railroads, where the many poles tend to obstruct visibility. Interlocking plants at most of the many railroad grade crossings along the Illinois Terminal are housed in neat, modern, one-story brick buildings.

well. It faces a downtown street and is built on a hill so that the tracks from the Illinois River bridge (owned by the ITR) run into the rear end of the basement, forming an ideal train housing.

St. Louis commuters make up an important segment of the passenger revenue. Frequent express service is run to Venice and Granite City, industrial suburbs, and heavy high speed cars make approximately hourly trips to Alton, 24 miles north on the Illinois side of the Mississippi. Grafton, 15 miles beyond Alton, is served by two rail motor cars running on steam tracks.

The Illinois Terminal passenger may be an important Peoria business man and freight shipper riding the air conditioned observation-lounge car on the *Illmo Limited* (and deluxe services like this are maintained for their advertising effect as much as for revenue), or he may be a cross country traveler who has routed his interline ticket via Rock Island and Illinois Terminal from Chicago to St. Louis. His coach ticket is honored in the observation car on payment of a nominal seat charge, and he sits in a comfortable chair watching the scenery from the rear windows or perhaps reading. Around Springfield he will have a light lunch, prepared by the efficient porter-cook-waiter. Or the passenger may be a rural mechanic riding the morning local, sitting in one of the smoker seats near the front end of the combination car and watching with casual interest as the mail is loaded or as crates of chicks are stacked toward the ceiling.

Along the way a freight train will be passed here and there, perhaps a short way freight switching local business, or maybe a long through train. Perhaps two freights will be at one siding and the passenger train will wait while the freights pull around it to clear the track ahead. Most of the freight business moves at night, and even then the passenger

Illinois Terminal.

## Passenger rolling stock.

Finest ride on the Illinois Terminal is in the air conditioned reserved seat coaches on the crack Peoria-St. Louis limiteds. Interior is shown above, exterior of the *Illmo Limited* at right above. Coach tickets are honored in these lounge-observation cars with only a nominal extra seat charge. Coach interior is shown below, together with a typical Springfield-Danville train of earlier-than-1936 vintage in front of Champaign city hall.

won't see heavy freight trains between St. Louis and Edwardsville, for it is at Edwardsville that the network of belt and terminal lines really begins to fan out and so all main line freight trains terminate at this gateway to East St. Louis.

Here in the St. Louis area is the nub of the Illinois Terminal freight business. All the powerful locomotives and straight rights of way in the world won't haul freight if there's no freight to haul. But directly on Illinois Terminal tracks are 250 industries, and 3500 others are available through reciprocal switching. Direct connection is made with every railroad in the St. Louis area. Here on the river flats east of St. Louis is a great industrial and shipping area and here the ITR was born.

Back in 1896 a group of Alton business men, headed by men from the Illinois Glass Company, organized the Illinois Terminal and built the first 6½ miles of line. The road grew, leasing, building, or buying additional terminal trackage. But this strictly steam switching and transfer road was a far cry from the system of today. The big change came in 1928 when the Illinois Terminal Railroad System leased and consolidated into one railroad the Illinois Traction System (now the main long distance electric divisions), the St. Louis, Troy & Eastern Railroad, the St. Louis & Illinois Belt Railway, and the

St. Louis Electric Terminal Railway Company. Later still other roads were absorbed to complete the coverage of the East St. Louis industrial area.

Physically the road is in excellent shape. Some rail is as heavy as 130 pounds per yard. Most of the trolley wire is catenary, and the 51 substations are mostly of 2000-ampere or greater capacity. Grades and curvature are both very conservative for an electric line and have been improved in recent years. Practically all main line is of course single track, but the passing sidings are long enough for maximum freight trains. The line between Peoria and St. Louis was relaid a few years ago with new rail and is block signaled.

Main shops of the system are at Decatur and it is here that the electric locomotives have been built and that heavy repairs are made on all interurban equipment. Auxiliary shops are located at Granite City, and steam locomotives are maintained at Alton. Somewhat more than 1200 freight cars are owned. Most of the right of way is owned outright, although some is still on public streets or on easements from abutting owners. At Champaign and Urbana the belt line makes use of trackage rights on the Wabash and the Illinois Central.

As is the case with most consolidated electric systems and even in recent years with homogeneous

Car 233 of the old Illinois Traction System (the electric lines before acquisition by Illinois Terminal Railroad) was a business car with dining and sleeping accommodations. Notice piano in forward compartment. Interior is of same car. No. 270 was built by Niles in 1906 for the Columbus, Delaware & Marion and was rebuilt many times by ITR.

All photos on these pages, CERA, by George Krambles, except as indicated.

Linn H. Westcott.

**Entrance to St. Louis.**

With elevated structure in the foreground, McKinley Bridge in the background, and interchange yard at the right, this view well illustrates ITR's fine St. Louis terminal line. Camera faces north.

lines which have taken advantage of the second hand equipment market, Illinois Terminal passenger cars have varied design and origin. The major portion of the heavy interurban equipment was taken over from the Illinois Traction. These were truly cars for the connoisseur, with their arch windows and colored glass transoms, but in recent years the windows have been squared out as part of a modernization process which makes the cars look longer and newer.

Prior to 1938 heavy open platform observa-

Paul Stringhan, Rock Island News Stand, Peoria, Ill.

**Singing trolley wire.**

Electrics may lack smoke and steam, but there's a thrill to the smooth, nearly silent motion. The locomotive is pulling a local freight near Peoria; the car is crossing Lake Decatur at 70 m. p. h.

tion cars were used on the Peoria-St. Louis limited trains. In 1938 the cars used were rebuilt with square windows and enclosed rear ends. At the same time they were air conditioned. One open observation car still exists but is used only for special movements. This is the 234, which was the *Sangamon*, built by the Danville Car Company as private business car of William B. McKinley. Another luxurious private car was the 233, built by American Car & Foundry in 1909 for the use of H. E. Chubbuck, then general manager of the Illi-

Illinois Terminal.

Linn H. Westcott

## From St. Louis to Alton.

Inside Central Terminal Building, left, at 710 N. 12th Blvd., St. Louis, a large elevator lowers us from waiting room to train level, where we board the fast suburban train to Alton. The track layout is operated entirely with spring switches, arranged so that

nois Traction. The car is still in use, but has been modernized with arch roof, square windows, and with the interior somewhat simplified. As originally built it was a complete home and office on wheels. In its early years the car was in use five days a week consistently. The Illinois Traction was a large and growing system, and Mr. Chubbuck was all over the property.

The high speed drop center cars used on the St. Louis-Alton fast suburban service were originally East St. Louis & Suburban "Lebanon" limited type. The double-truck lightweight cars used in St. Louis-Granite City local suburban service came from the Chicago & Illinois Valley Railroad, an interurban line in the northern part of Illinois, from Joliet west to Spring Valley, which was also a part of the old Illinois Traction system.

The sleeping cars were at first 10-section motor cars, but these were replaced in 1910

It's a very short run past railroad yards near the river to the west McKinley Bridge approach. The center passage through the trusses was at first exclusively railroad, but has since been planked to allow four vehicular roadways on which Illinois Terminal collects tolls. Diverging tracks are from the elevated, straight tracks from old surface route. The combination Diesel-trolley locomotive may be at work along the line as we ride to Alton.

Linn H. Westcott.

Illinois Terminal.

Illinois Terminal. Linn H. Westcott.

arriving cars can pull onto a departure track immediately after discharging passengers. Near the throat is a wye for turning the single-ended through cars. Some tracks are for freight, serving the warehouse above. Throat runs under two newspaper plants, good customers, and has lead tracks for tail-switching the terminal. After a few blocks of subway and a block on the surface, a steel elevated continues past two stations, dips into an interchange freight yard, and then joins the McKinley Bridge across the Mississippi. The elevated is heavily built, suitable for freight as well as passenger traffic. A backward glance shows the St. Louis skyline.

with 10-section trailer sleepers because the motors made the cars noisy. A distinctive feature was windows for the upper berths. Still later nine-room air conditioned bedroom cars made their appearance on the *Owl*. Sleeping car service was discontinued only last year, August 1, 1940.

The right of way follows other railroads enough of the way to add to the interest of an ITR ride. On both sides of Springfield the main Peoria-St. Louis route lies along the Chicago & Alton. Nearer St. Louis and also east of Decatur it's the Wabash, while along the farthest east reaches of the system there's a lot of the old Peoria & Eastern, now Big Four.

Contrasting with the big time elegance of the right of way through or around the big cities is the old-time traction flavor of the track through unpaved main streets of small towns, the short curve to get around a grain elevator at Williamsville, and the station in Eisimonger's Grocery Store in Broadwell. But even in Lincoln, where the big orange cars lope easily and informally down the bustling main street and stop across from the

After winding through Granite City by devious routes the Alton line passes Nameoki and beyond that point there are few grade crossings. One of these few is at Mitchell, shown here. Beyond the highway crossing the electric line climbs over Big Four, Alton, and Wabash tracks, and if one is lucky he may see a train on one of these lines from excellent vantage point. Also along the way are many industries, and yards aplenty. This is the terri-

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Illinois Terminal.

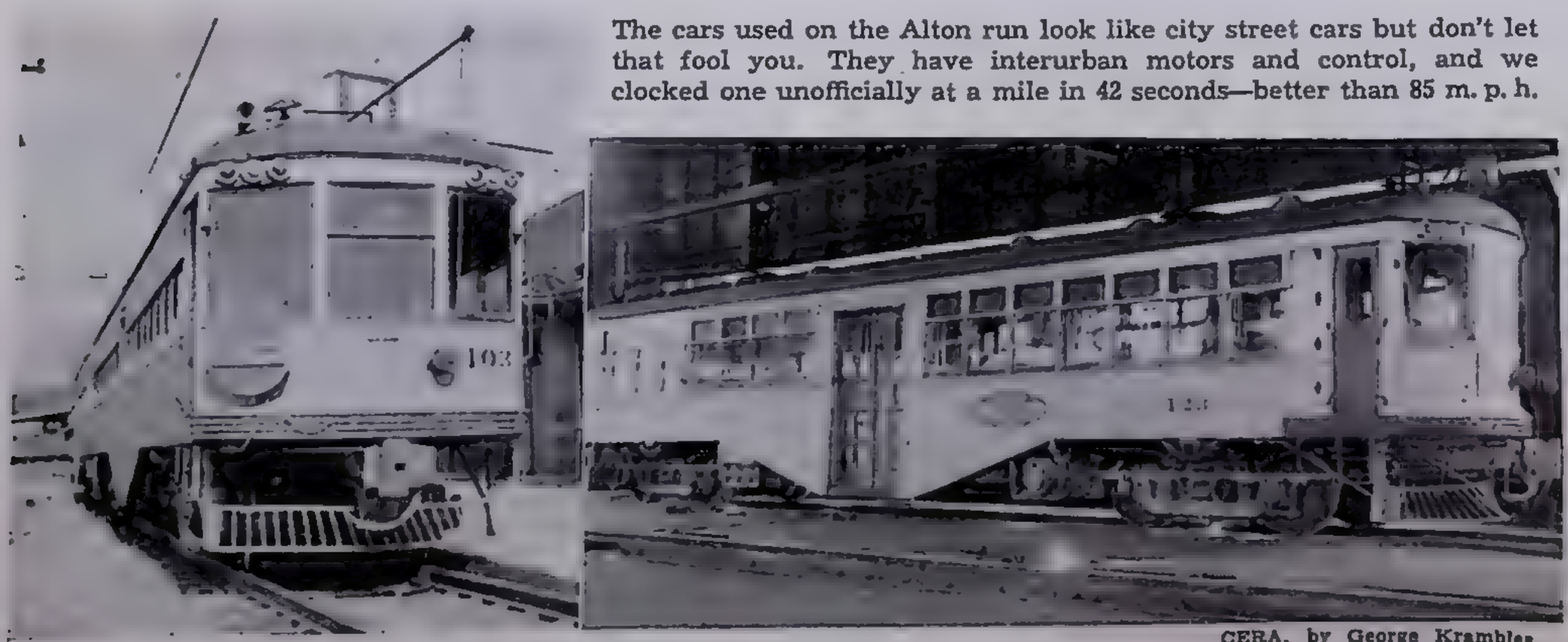
tory of the original steam Illinois Terminal Railroad, and we are likely to see one of its steam trains, as in this photo of No. 31, a Mikado, hauling cars out of the Standard Oil plant at Wood River. A few miles farther along, almost into Alton, we pass the steam roundhouse of the Illinois Terminal. Our train is very likely run by Motorman W. "Dutch" Horrmann, who has been with the railroad since 1903. Fare to Alton is 65 cents round trip; cars run every hour. This well sidelighted view of IT's facilities should be on any St. Louis stopover.

Alton station, everything is so arranged as to offer no obstacle to long freight trains. Many a street corner curve in the smaller towns has been eliminated by a block or half block of private right of way cutting through the back yards of store buildings.

Let's take a ride over the interurban portions of the line. From Chicago we can pop down to Danville on one of the excellent *Dixie* trains of the C&EI, stay overnight, and take the 7:20 a. m. local to Decatur. We have a good look at the railroad facilities of Champaign and Urbana, home of the University of Illinois and one-time headquarters of the Illinois Traction. Here we learn what it feels like to ride an interurban car on Wabash and Illinois Central track. We have a 40-minute wait at Decatur to look around this railroad center on a beautiful overgrown river which the local citizenry calls Lake Decatur. Then we're off on the 10:30 local to Peoria, retracing our belt line route for the 2.1 miles to North Junction. North we go to Bloomington, and west to Mackinaw Junction, a pretty spot out in the woods where the operator's wash hangs from a line in the substation yard. The last few miles into Peoria is a meandering route down a green gulley into the Illinois Valley, a crowded area of yards and junctions, then the great Caterpillar Tractor factories with dozens of "Earthworms" awaiting shipment, and finally the broad expanse of the Illinois, which we cross on high McKinley Bridge.

Lunch must be a quicky at the Union News counter upstairs, for we are in at 1:05 and the St. Louis limited leaves at 1:30. Outbound we take a better look at the Illinois Terminal freight house and car storage just south of

The cars used on the Alton run look like city street cars but don't let that fool you. They have interurban motors and control, and we clocked one unofficially at a mile in 42 seconds—better than 85 m. p. h.



CERA, by George Krambles.

Linn H. Westcott.

the tracks and at the skyline of the city. Peoria is quite a bustling place, connecting point of 15 trunk line railroads, passing point for river barges, and home of whiskey, steel, and Alexander Botts. As St. Louis is the big end of the ITR, so also is Peoria the next biggest end, with its 10,000 carloads or more a month.

Straight south from Mackinaw Junction heads our 1:30 car, with controller on the last notch except for brief flag stops at Mindale and Union, and a speed reduction in a cut under two railroad bridges. Far across the rolling hills is an Alton freight train, strung out like so many toy cars behind a black spot with plume of white smoke. At Lincoln we join the Alton for a cruise through a typical set of small Illinois agricultural towns.

South from Springfield is more of the same, until the approaches of East St. Louis start to thicken about the track. The curves of the belt line which avoids the streets in Granite City are confusing, but every now and then the black trusses of McKinley Bridge are visible in the distance and always we approach in that general direction. We cross dozens of railroad tracks on a mile-long trestle and glide past the big power house built at the east end of McKinley Bridge in 1910 to supply the south end of the system. In Missouri our train swings south onto a double-track steel trestle, passes two elevated stations in a shabby residential and light manufacturing section, and at 6 o'clock pulls to a stop in the basement of 710 N. 12th Blvd.

The man behind the Illinois Terminal is Andrew P. Titus, president, who started in the car department of the Lake Shore & Michigan Southern in 1890 when he was only 17. On the Wheeling & Lake Erie and the Alton he worked upward, until he was chief operating officer of the latter road when called to the Illinois Terminal in 1929.

Linn H. Westcott.

This, then, is the business that grew from the little 6½-mile railroad built by Alton business men in 1896. Or did it? Corporately, yes; but there was, after all, the big traction system which was picked up bodily and consolidated with the other Illinois Terminal components in 1928. This Illinois Traction System was an empire, the empire of one man.

William B. McKinley, Illinois-born son of a Presbyterian minister; congressman, traction magnate, philanthropist—he was the Illinois Traction. Look back to 1912 in the heyday of the interurban. The now-dominant Illinois Terminal Railroad was then but a one-million-dollar company in Alton, with 18.75 miles of track. But the Illinois Traction System, William B. McKinley, president, controlled 24 smaller traction and power companies.

The 628 miles of track covered substantially the routes of today. One hundred and six trains a day were leaving the Springfield terminal alone. Sleeping cars had been running on the Springfield-St. Louis run for several years and had recently been inaugurated to Peoria as well. Observation-parlor cars were carried on principal trains of all three main lines. One coal mine loaded 300 cars a day. Total car and locomotive equipment was 1256 units. Total assets were 20 million dollars, and 1912 earnings three million.

William B. McKinley was not a man to be stopped. The steam roads had refused him the use of their bridges into St. Louis and so in 1912 we find the Illinois Traction glorying in its new five-million-dollar McKinley Bridge, two miles long with approaches.

But this wasn't all. Big plans were afoot. The *Electric Railway Journal* said, "The McKinley interurban lines closely follow a direct line between Chicago and St. Louis. There is a gap . . . between Morris and Joliet and an incomplete section . . . between Mackinaw Junction and Streator. . . . Construction work will soon . . . make possible through electric service from Chicago to St. Louis." So perhaps the most intriguing of the ITR's few abandonments was that isolated section west of Joliet, called the Illinois Valley Division. Or perhaps it was the abandonment of a stretch never actually built, the track we didn't see at Mackinaw Junction.

Those traction dreams of expansion may be gone, but the old Illinois Traction stays on. The name is that of a 6½-mile terminal railroad at Alton in 1896, but the road itself is an interurban railroad wisely regeared to modern conditions.

# Letters

★ Interesting sidelights on railroads as readers observe them.

## Trip Through Colorado.

RETURNING from Wisconsin to California through Colorado, the April issue of TRAINS was our guide. From Denver we drove up to East Portal, then over to Blackhawk and Central City. At both cities they have set out a C&S engine and several cars in a public spot as a museum piece. The one at Blackhawk had all movable parts brazed down! In the distance we saw a work train taking up the rails.

We then went up to Georgetown and Silver Plume, following all the old roadbed. The abutments of the old loop are still in evidence. At Silver Plume the old station is still being used. Roadbed of the Argentine Central is still very much in evidence, including several switchbacks.

Our next jump was down to Colorado Springs and Manitou, and we followed the Midland Terminal to Cripple Creek. We saw where the old Colorado Springs & Cripple Creek Railroad ran. At Cripple Creek we talked the agent out of an old book of train orders dating from 1917 to 1923, of the Colorado Springs & Cripple Creek, Florence & Cripple Creek, and Colorado Midland. There are some very humorous ones among them.

From Cripple Creek we drove down to Florence on the right of way of the Florence & Cripple Creek, through Phantom Canyon. I think Phantom Canyon has Royal Gorge beat for scenery. There are two tunnels and six of the old railroad bridges still in use. At one bridge we had our only mishap; we picked up a nail. As we were fixing it we found several old spikes. I wish I'd been born 20 years sooner! That surely must have been some ride, up that canyon.

At Salida, our next stop, we chiseled the operator out of some time cards. There wasn't much doing there, although we did see a 56-car drag come in from Gunnison. We stayed at Alamosa that night, and next morning took the train to Pagosa Junction, where we met the returning train. I was surprised at the fares; I expected to pay at least 3 cents a mile and found it was less than 1½ cents a mile for the round trip. We paid 50 cents extra to ride the parlor car (which we had to ourselves), but rode most of the time on the platform. The scenery from Antonito to Cumbres Pass and down to Pagosa Junction is really wonderful. I don't understand why the D&RGW doesn't advertise it more. With those modernized cars it is really a super-ride. The meals served in the dinette were swell too.

Saturday morning we got up at 4 and drove to Durango, where we caught the mixed up to Silverton. We at first thought of riding the branch to Santa Fe, as it was to be abandoned soon [see page 4, this issue], but after a lengthy conversation with several brakies and Mr. Carpenter, the super, we figured the Silverton branch was the better. Except for the rain (it rained every day) it was the best ride I've ever had. The crew invited us to ride the crummy, and we rode all the way in the cupola. We even had some coffee made the real way, with a black coffee pot stuck down in the coals of a potbellied stove. I believe the

Bill Cooper.

**Old Glory.**

Norfolk & Portsmouth Belt Line, which connects with all roads entering Norfolk, Portsmouth, and Newport News, shows its patriotism.

**As they were.**

Lake Shore Electric Railway cars 158 and 168, as they appeared at Fremont, O., before service on the interurban line was discontinued.

Las Animas Canyon beats anything else the D&RGW or any other road has for scenery.

Our four short days in Colorado ended that night and we made an overnight run to Los Angeles, arriving Sunday afternoon.

*Robert W. McGrew.*

1122 N. Campbell St., Glendale, Calif.

### NYC Says "999" Did It.

MARTIN D. STEVERS stated in his article "The Passenger Train," June TRAINS, that engine 903 ran 112.5 miles per hour in 1893. It was not that engine, but old "999," run by Charlie Hogan, who died just last year.

*Granville Thomas.*

31st St. and West Ave., Ocean City, N. J.

[There seems to be divergence of opinion as to which of the locomotives made the run, but (as stated in Gil Reid's cartoon, July TRAINS) the New York Central gives the credit to "999."—*Ed.*]

### Flying the Flag.

THE Norfolk & Portsmouth Belt Line Railroad has begun painting American flags on the cylinders of its Consolidations. The road's master mechanic, H. E. Parker (father of Ace Parker, football star), had the idea, and L. L. Gooding painted them on. The accompanying photo is of No. 41, the first to carry the flags, crossing a timber trestle on the line.

*Bill Cooper.*

1202 Redgate Ave., Norfolk, Va.

### Original Lake Shore Cars.

I'VE seen so many photos recently of Lake Shore Electric Ry. cars that have been put in use in Iowa, including those which illustrated "Iowa Interurban" in the June issue of TRAINS, that I'm beginning to wonder how many of your readers know what the original cars looked like, so I'm sending a couple of photos taken when the line was still going full blast.

*Elmer Kremkow.*

2075 Vinewood, Dertoit, Mich.

Elmer Kremkow.


*Know Your*

**AMERICA**

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**THE MAP** is an actual colored lithographic reproduction of a raised relief, incorporating the missing link in all previous maps, height. This unique map is the creation of Theo. W. Ohman, whose work has been acclaimed by leaders of industries, educators, and other renowned map makers. He has spent many years in the development of an original process for making fine-detail relief maps and later, through his own method, created this reproduction which appears to be actually raised.

**RAILROADS** are shown clearly and every route of any importance (heavy lines), even many branch lines (light lines), can be followed with ease. All important stations are shown, and the relief makes it easy to tell how the railroad crosses mountains, follows river valleys.

**AMERICAN GROWTH** - Know your country. From this map which so well portrays the geographical features of our land learn how and why the country grew, see how early development followed the rivers, how the first railroads influenced development and why they were built; see how terrain in the early days shaped the distribution areas of today.

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*The* **Ohman Co.**

*Makers of Fine Maps*

MEMPHIS TENNESSEE

# The Month

★ Short line makes good; defense traffic boom.

★ The 20-mile Unadilla Valley Railroad in southern New York state, the railroad which gained national fame as the typical American short line through a documentary writeup in *Fortune* back in August, 1938, has asked I. C. C. permission to buy the New York, Ontario & Western's 29-mile New Berlin branch, with which it connects at New Berlin. This seems to prove points made in the *Fortune* article about efficiency of local, small-company management for a branch line, small-town railroad.

★ Leon Henderson questions whether the railroads will handle all the armament freight traffic without hitch. Fact: American railroads are handling an unexpectedly huge cargo without difficulty. Fact: For eight years the railroads, like all other industry, had been discouraged by government from expanding their plant, and even after the defense work started no one seemed to know how much expansion of carloadings, or steel or aluminum either, it would mean. New cars and locomotives were ordered more than sufficient for anything that was predicted in the first months of the program. If there is any shortage of transportation blame will go to the government for constantly changing objectives, for lack of planning. The railroads will be in the spot of the young married couple who planned for a baby and got triplets. Nobody, not even OPM, seems to know if the defense program is going to have triplets or just twins.

★ Send notices of fan trips before the first of the month preceding date of issue or they cannot be included in TRAINS.

*Fan Trips*: September 7, over soon-to-be-abandoned lines of Los Angeles Railway. Fare, $1. Railroad Boosters, 518 Pacific Electric Building, Los Angeles.

September 14, in Philadelphia over the Fairmount Park trolley line, a private right of way using open motors and trailers in Summer and closed cars in Winter, all built in 1897. Fare, $1. Leave 48th and Parkside Avenue 1 p. m. National Railway Historical Society, Sydney S. Walker, 1610 N. 52nd Street, Philadelphia.

September 21, from Chicago over South Shore Line. Central Electric Railfans' Association, 1240 Edison Building, Chicago.

October 5, from Los Angeles over Yorba Linda, Whittier, and Fullerton Lines of Pacific Electric, none of which now have passenger service. Fare, $1.35. Railroad Boosters, 518 Pacific Electric Building, Los Angeles.

★ The three-foot gauge Pacific Coast Railway has been authorized to abandon its 52-mile main line from San Luis Obispo, Calif., south to Los Almos, and a 12-mile branch to Sisquoc. This narrow gauge has been a favorite with Los Angeles rail fans and started life as connection between San Luis Obispo, important city on SP's coast line, and its port.

★ A good part of the old West will vanish if the I. C. C. allows petition to abandon the portion of Virginia & Truckee from Carson City to Virgina City, Nev.

★ Fifteen railroad paintings by Peter Helck, who has done illustrations for many railroad and A. A. R. advertisements, will be on display September 15 to October 10 inclusive, 9:30 to 5 weekdays, 9:30 to 1 Saturdays, at the Theodore A. Kohn Galleries, 608 Fifth Avenue, New York. There is no admission charge.

★ Effective date of abandonment for D&RGW's Santa Fe Branch (see page 4) has been extended to September 1 by I. C. C.

★ *Back Cover*: Westbound Northern Pacific freight starting the ascent to 6000-foot Bozeman Pass a few miles west of Livingston, Mont.

Courtesy C&EI.

**Educational excursion.** Second grade students of Flossmoor, Ill., public school were taken for a ride on the C&EI recently, and Joseph Kiefer, chef of *The Zipper*, is here shown explaining how meals can be prepared in such a restricted space as that of the dining car kitchen.

MAYBE he is your son—who smiled so cheerfully when he boarded the troop train. Or maybe he is that serious young fellow who worked next to you. Or that happy-go-lucky boy of your neighbors.

Whoever he is, he's working hard and cheerfully, putting up with some real hardships to keep America the way it always has been and the way we want it to stay.

But he can't do his job unless the rest of us do ours. And for our part, we can say—we won't let him down.

We'll step up to our part in moving these vast quantities of food and supplies—yes, and the vaster quantities of raw materials from which they are made. The railroads are equipped and organized to do this and at the same time take care of the other mass transportation needs of the nation.

The speed-up of the defense effort and the shifting of large freight movements from water to rail have increased the demand on railroads, but the railroads have successfully taken on each new assignment—and are stepping up their equipment to keep pace with future needs.

Since the fall of 1939, the railroads have added nearly 200,000 new and rebuilt cars—and more are being added every day.

Just one example—for months railroads have delivered an average of 5,000 carloads a day of materials at camps and other defense projects—with never a tie-up or a delay on account of rail transportation failure.

To keep this record clear—to meet the needs of America—is the firm resolve of the American railroads and the loyal army of more than a million railroaders. We have the plant. We have the man power. We have the skill and the ingenuity to do the transportation job that only the railroads can do.

We won't let him down.

**ASSOCIATION OF AMERICAN RAILROADS** WASHINGTON, D. C.

See page 59.

E. R. Augustin Jr., Livingston, Mont.